Victorian Residential Efficiency Scorecard

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Acknowledgment

We acknowledge and respect Victorian Traditional Owners as the original custodians of Victoria's land and waters, their unique ability to care for Country and deep spiritual connection to it. We honour Elders past and present whose knowledge and wisdom has ensured the continuation of culture and traditional practices.

We are committed to genuinely partner, and meaningfully engage, with Victoria's Traditional Owners and Aboriginal communities to support the protection of Country, the maintenance of spiritual and cultural practices and their broader aspirations in the 21st century and beyond.

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Accessibility

If you would like to receive this publication in an alternative format, please email help.scorecard@delwp.vic.gov.au.

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The Victorian Residential Efficiency Scorecard

The Victorian Residential Efficiency Scorecard (the Scorecard) is the first of its kind in Australia and fulfils a critical need – the means to measure and improve the comfort and energy cost of homes.

It has been developed based on extensive analysis of best practice in home energy performance and ongoing stakeholder input. With the help of the Scorecard, many projects are delivering real improvements to Victorian homes. At the end of April 2019, nearly 2000 Scorecard assessments had been completed across Victoria.

Homes in Victoria should be comfortable in hot and cold weather and not be costly to run. We know that most homes are not in this category. Some heat up fast and become unhealthy without air-conditioning during heatwaves. Some cost a lot to keep comfortable in winter. A large proportion of homes in Victoria were built before any building standards were in place and perform poorly. Even new homes can benefit from improvements, as they can be large with inefficient features.

A trustworthy scale such as the Scorecard helps Victorians tell the difference between comfortable, efficient homes and poorly performing homes. The Scorecard is like the invention of a reliable weights scale in mediaeval markets. Before the Scorecard there were many opinions on home energy performance, now there is a scale based on the best evidence available. With this new ability to measure performance a range of new opportunities emerge.

Under the Energy Efficiency and Productivity Strategy the Scorecard is supported and managed by the Victorian Government with $5.7 million over four years.

The Scorecard has been developed so that everyone can benefit. New homes and existing homes, many apartments, townhouses, homes in regions and rental homes can all be assessed, compared and upgraded.

As home performance can only be rated through modelling – how the walls, floor, roof, windows, insulation, appliances and any solar panels interact – the accuracy and reliability of the Scorecard tool is vital.

Trust in the program is also important: householders are often subject to conflicting claims from businesses and they need to be able to trust advice they are given. Surveys have found that householders are seeking trustworthy advice on home energy performance, and around 50%[1] say they are prepared to pay for this advice. It is fundamental that any two assessors give the same house the same rating, so training and quality control of assessors is essential.

The Scorecard program has closed this gap in the market with a technically robust tool, supported by expert trained assessors, facilitated by quality controls, training and communications products.

National opportunities

The Scorecard is designed to be widely used in new and existing homes and across climate zones. The program prioritises consistency and supports highly skilled assessors and ongoing development of the profession.

Under the National Energy Productivity Plan[2], funding was provided to expand the program to cover wider climate zones and testing by all jurisdictions. As a pilot, assessors have been accredited in each state. In 2020 a feature is also being added to allow existing thermal performance assessments (NatHERS assessments) to be used directly in a Scorecard rating. This supports easier and broader assessment of new homes.

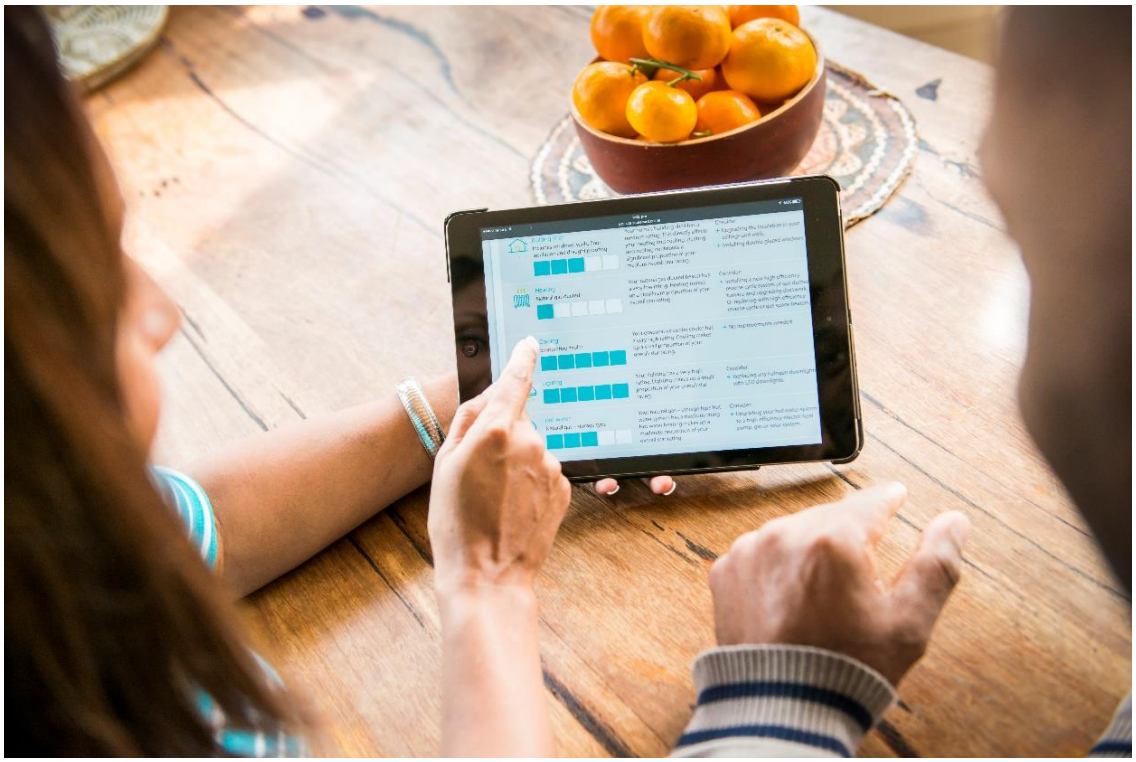
[1] [1] Romanach et al (2015) The Energyfit Homes Initiative: National Consumer Survey Results

[2] https://www.energy.gov.au/government-priorities/energy-productivity-and-energy-efficiency/national-energy-productivity-plan

How the Scorecard program works

- Scorecard provides an energy cost performance star rating for homes. Comparable information is one of the most useful ways to support upgrades. With the Scorecard, people can easily see energy performance and compare before and after a renovation, between different properties, new and existing homes, apartments and houses.
- Scorecard gives specific information about home features. Generic information is often available (e.g. ratings for appliances), but a major information gap is an evaluation of the performance of a home and interactions between its features. It is important that energy use of the home is determined under average behavioural conditions, to ensure comparability between homes.
- Scorecard rates the performance of the home in hot and cold weather. This tells the householder how difficult it will be to keep their home cool in a heatwave or warm in cold snaps. Improving this performance can help reduce peak demand on energy infrastructure - times when delivering energy is costly and more likely to drop out.
- Scorecard provides upgrade options specific to the home. Information is provided on the most cost-effective improvements for the home, to address energy costs and hot weather performance, which is then demonstrated in an improved rating.
- Scorecard delivers information through a reputable mechanism. This includes reputable assessors, tools, quality controls and protection of health and safety. Assessor training, accreditation, and oversight are provided to protect the consumer. As a continuous improvement approach, stakeholders are involved in the program through design and delivery.
- Scorecard is a government supported program. It is reliable, coordinated and consistent so householders can use the rating to access other programs and rely on the results.

Read on to learn what we have found out in the first two years of the Scorecard program. This report starts with a summary of data and consumer feedback highlights, follows with case studies and more detailed data analysis, wrapping up with summary of how the program has been designed.



Scorecard Fast Facts

The Scorecard program provides an energy star rating for your home in the same way as a fridge or washing machine has a star rating. Scorecard assessments are tailored specifically to each home and are delivered by government-accredited assessors. Scorecard assessors also provide households with reliable advice on how to reduce energy costs and increase home comfort.

A high Scorecard star rating means the home will use less energy and cost less to run than one with a lower star rating. Scorecard assessments also provide detailed analysis of home energy performance that helps householders and the community. This report provides insight into what has been discovered in the first two years of the program.

Take-up

1870 **Scorecard home assessments completed in 24 months, with 220 of these occurring in regional Victoria.**

Assessors

40 **Victorian Scorecard assessors government-accredited.**

Scorecard has been piloted nationally with accredited Scorecard assessors in most states around Australia. As of July 2019, there are:

- 40 assessors in Victoria
- 4 assessors in South Australia
- 3 assessors in New South Wales
- 2 assessors in Western Australia
- 2 assessors in Tasmania
- 2 assessors in Queensland

Satisfaction

91% of customers were extremely or very satisfied with the assessment process and program.

Action

Of the 229 customers telephone surveyed, 52% had already taken home upgrade action, while 26% intended to act within three months of the assessment.

Of those respondents who did take action:

- 51% said it had increased their home's comfort
- 24% reported that their energy consumption had decreased
- 14% reported that their energy bill had decreased, although 50% did not know as they were not checking their usage

When asked how upgrades were financed:

78% personal savings

6% credit card

2% mortgage

14% found other sources

Finance was quoted as the biggest barrier to upgrades.

Home performance - the highs

95% Of homes assessed had very efficient lighting installed.

This suggests Victorian Government programs for upgrading home lighting (like Victorian Energy Upgrades) has successfully helped many homes save energy.

20% of homes assessed had solar panels installed, reducing energy costs significantly for these homes.

Home performance – the lows

A main point of weakness in homes was their building shell (walls, windows, roof, insulation, draughts).

Due to the way the home is constructed, homes can struggle to stay cool during hot weather and warm during cold weather.

It was found that 75% of homes would be uncomfortable in cold weather or would be costly to keep comfortable.

85% of homes received the lowest possible rating for hot weather performance.

29% of homes had their main heater rated as very low or low cost-efficiency which shows a significant proportion of homes have heaters which are expensive to run.

8% of houses assessed had no ceiling insulation which is well below the standard of Victorian housing expected today.

20% of houses had no fixed cooling.

Quality control

Scorecard assessors are skilled and knowledgeable. It is critical that any two accredited assessors would give the same house the same rating.

Nearly all assessors that are active on ground have been audited, at least once. The audit results indicated that 5 assessors would benefit from some additional support, which has since been provided in the form of in-person meetings, training or mentoring.

None of the audits required sanctions to be imposed, such as penalty points or termination.

Marketing

Short and fun videos have proved the most popular way to learn about the program.

https://www.youtube.com/playlist?list=PLI25liwKHjvW-mRdWkXqZjys49VbFkrKU

Take a look at our fun promotional videos.

Benefits of higher star rating homes

Homes with a higher Scorecard star rating cost less to run, but how much can you save?

The Scorecard star rating is a measure of the expected cost to run the home - householders can always save more by being better than average, such as turning lights off more than the average house.

For a 10 star home, the generation of solar energy more than offsets the energy used in a home by fixed appliances.

The average Scorecard rating is three stars.

A typical package to upgrade from 3 stars to 10 stars is $11,800.

Predicted to save $2,000 per year on energy costs.

Stories from the Scorecard

Case study: Scorecard tool finds the hidden problems

A brick veneer house in Reservoir had a Scorecard star rating of 3 stars. This is the average rating of an existing home.

It is a typical Victorian home that is heated and cooled by an old reverse cycle split system. The house has ceiling insulation (R2) that was installed poorly with gaps between the batts.

The Scorecard certificate identified the poor insulation as a significant issue and suggested topping it up. Installing a more efficient heater was also suggested.

This householder was specifically looking for the most cost-effective options for reducing their bill and improving comfort in the home. The Scorecard tool creates a 'model' of their home, so it was decided to examine the output data from the tool to determine the best option.

The additional data showed that air leakage was the most significant issue, and that a high-flow shower head was contributing to high hot water costs. A lot of heat was being lost through the ceiling, but this was less significant than the air leakage. Fixing the air leakage and replacing the shower head with a low-flow version increased the star rating from 3 to 4.

Often households need to prioritise where they invest and need good information to make these decisions. The Scorecard certificate and a knowledgeable assessor can help to achieve this.

In the next phase of the program, it is proposed to provide an on-screen report of the most useful data for assessors. This will be additional data that is not currently visible to assessors and will assist in prioritising and discussing upgrade options with the householders.

Case study: Victorian Healthy Homes

The Victorian Healthy Homes Program is currently looking at the health benefits of improved energy efficiency and warmth in low-income households in western Melbourne and the Goulburn Valley. Scorecard is an important part of the program.

Targeted program participants are low-income householders who are also receiving home and community care services. They receive a free home energy efficiency upgrade valued at up to $3,500, focused on providing a healthier and more energy efficient home during winter. Each of the participating 1,000 households taking part receive a Scorecard assessment before the home energy upgrade is done.

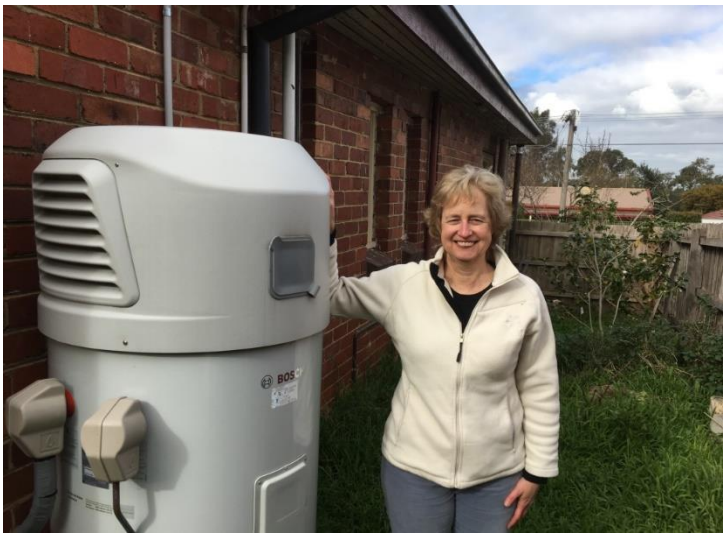
Researchers will be able to look at changes in indoor temperature and humidity due to the upgrades and then link these changes to improved health and quality of life. Importantly, researchers will also be able to look at the Scorecard results after the upgrades have been completed as well as a more detailed analysis of the Scorecard assessment data. The research results from this program will be available in late 2021.

Healthy Homes is being delivered by Sustainability Victoria as part of the Victorian Government's Home Energy Assist Package.

Case study: Scorecard works for landlords

Landlord Jane Fisher has upgraded a few of her investment properties, making them more energy efficient than many of their neighbouring owner-occupied houses. The Scorecard came at just the right time for her, as she wanted to make her long-term investment property in Mitcham even more comfortable and desirable for tenants.

To determine which upgrade to invest in, Jane works out the possible tax benefits of any retrofit or home improvement, from insulation to window seals. Most repairs are able to be claimed as a tax deduction, and upgrades depreciate over time on investment property owners' tax returns. With this knowledge, she says "why wouldn't I?" when it comes to making the place more liveable. "It comes down to ethics really; it offends me that tenants are treated like lower class citizens. I think we have a duty of care, especially when it comes to simple improvements that can bring down bills," she says.



When Jane bought her current investment property, she was shocked to discover that there had been no ceiling insulation in the bedrooms to keep in warmth, with R2 insulation installed only in the living areas. "I think I've known about insulation since I was a child, and the only reason this house didn't have full coverage was because I thought it was already there." Jane upgraded the insulation throughout the whole ceiling, but the biggest difference came when the wall insulation went in. "It was about three degrees warmer inside in winter," she says.

The Scorecard building shell rating was one out of five, but with the insulation improvements in the wall and ceiling, it now receives three out of five. The building shell rating is an important feature on the Scorecard certificate, as it measures how the quality of the home's windows, walls, floors and ceiling contribute to heating and cooling use and expenses.

She's fascinated to hear that the biggest difference to the home's energy rating will come with a solar electricity system. The home would jump to a 10 star Scorecard rating with a 3-kilowatt system, but 8 stars is achievable with a smaller 1.5-kilowatt system to help reduce energy use and lower bills.

Jane's keen to install a solar electricity system one day, as she mentions the possible tax depreciation on it and the value it adds to the home.

"I think I've done a lot to make the house more liveable and comfortable, and I'd hope that a 6 star, or possibly 7 star house is appealing to tenants. "I think it's been very worthwhile getting an assessment in terms of the education and testing for energy efficiency should be part of every house sale and lease."

Read the full case study here https://www.victorianenergysaver.vic.gov.au/save-energy-and-money/get-a-home-energy-assessment/getting-an-assessment/if-youre-a-landlord-or-renter

Data Deep Dive

There is limited information on the energy performance of homes in Victoria, especially for older homes. Scorecard information is now one of the largest datasets covering energy cost and home comfort collected on-site in Victorian homes by experts.

This report is the first analysis of this Scorecard data. The data is an important resource to benchmark home performance, audit program benefits and compare between programs and approaches consistently.

It is important that assessment tools are not simply taken on trust and the basis and approach used are clear and available to the public.

The technical basis of the Scorecard has been published here:
https://www.victorianenergysaver.vic.gov.au/save-energy-and-money/get-a-home-energy-assessment/deliver-assessments/assessor-support-materials

The Scorecard tool

The Scorecard tool fills a specific gap – assessment of the energy performance of a home both quickly and accurately. Evaluating the most cost-effective solution to reducing energy costs or increasing home comfort is technically demanding. As this tool is a first of its kind in Australia, it has been designed so that it can be readily used in other states and territories of Australia with minimal further investment required.

The Scorecard is a cloud-based tool designed to be easily used in a home on a portable tablet device, such as an iPad. A trained assessor enters information on the energy performance of the home.

The Scorecard looks at the features of the home that drive energy costs over time – the performance of the building shell, including the walls, floors, windows, any insulation and air leakage sites. It also covers fixed appliances such as heaters, coolers, hot water systems, lighting, pool and spas and PV solar systems (Figure 1)

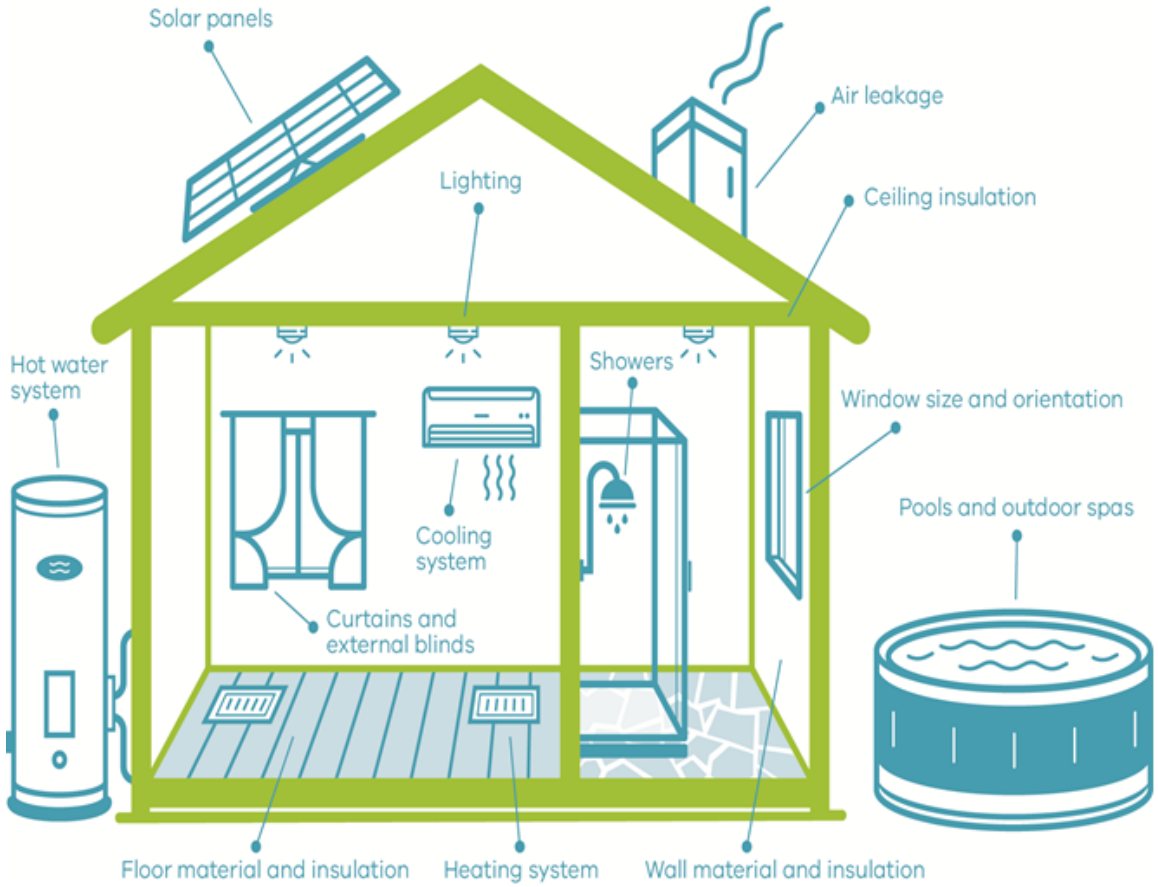


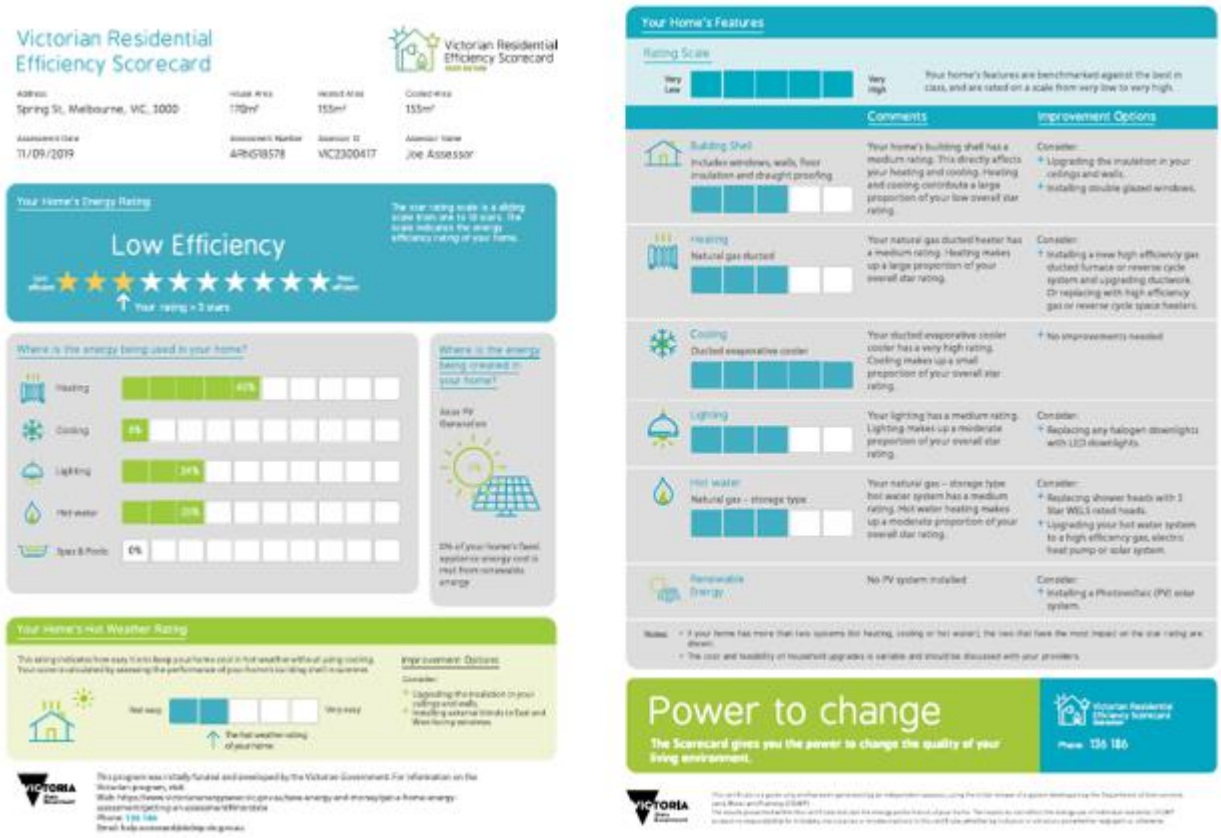
Figure 1 Diagram showing what the Scorecard covers in a home energy assessment

The Scorecard rates the performance of the home and produces a certificate for the householder with an overall score, as well as scores for the major appliance groups and improvement suggestions.

The system has been optimised through in-field experience to reduce the data collection required, promote data accuracy and provide the assessor with a smooth workflow.

It has been designed so that all data is privacy protected, and de-identified data can be examined to help improve services to the public.

The Scorecard is continually updated, and we seek feedback from Scorecard assessors through workshops and other means to help us improve the tool and other processes.



A sample Scorecard certificate

The Scorecard assessment provides a star rating of the house. This is a cost metric with a 1 star house being more expensive to run than a 10 star house. The star rating scale provides a means to compare houses as:

- An average home rates 3 stars
- An average new home rates 6 stars
- A 9 star home is cost neutral to run the fixed appliances
- A 10 star home exports energy to the grid. This means that the energy used by the fixed appliances is more than covered by the energy produced by the PV panels.

Studies have shown comparable information is essential to informing householders and supporting energy efficiency upgrades[3]. For this reason, ratings need to reflect an average user behaviour, and the cost of running fixed appliances, as they significantly impact energy costs. Non-fixed appliance energy use is highly variable from house to house and usually has a shorter lifespan than building fabric or fixed appliances.

[3] Low Carbon Living CRC 2016 Enhancing the Market for Energy Efficiency Homes p33

What have we found out about homes?

The data analysis in this section is based on 1870 Scorecard assessments from April 2017 to April 2019 undertaken in Victoria (Figure 2).

Note: these homes were not selected to represent the Victorian building stock and the data should be used with caution. The main factor likely to influence the result is that low income homes are likely to be over-represented in the data set.

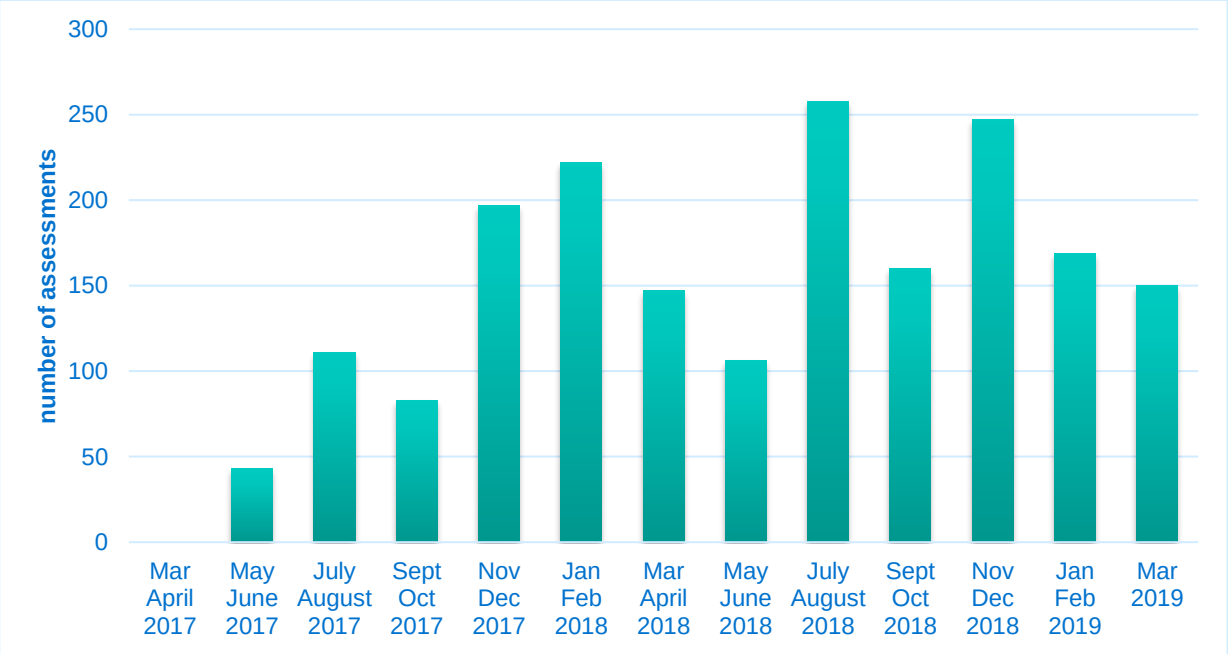


Figure 2 Number of Scorecard assessments over the first 2 years of the program

Where energy is being used in the house

Each assessment shows where the energy is being used in a house. From averaging these results, 57% of the energy cost came from heating, 29% from hot water, 8% lighting and 5% cooling (Figure 3).

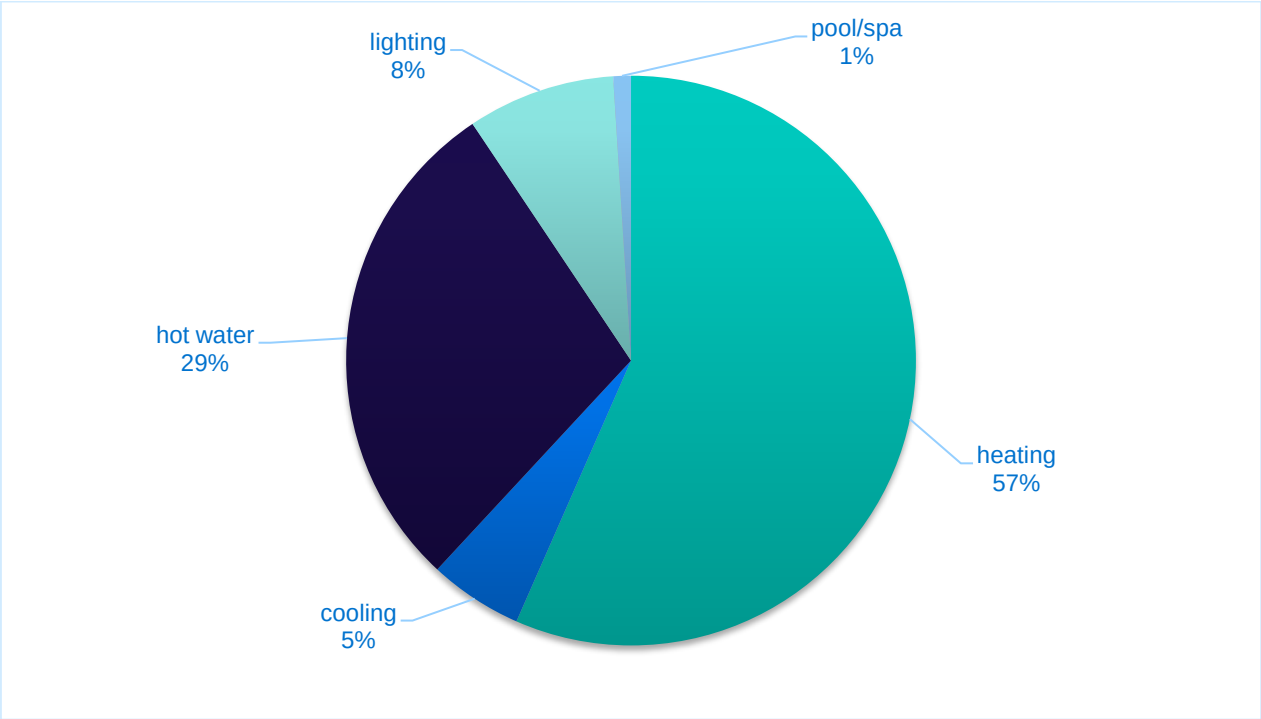


Figure 3 Where energy is being used in the houses assessed

Given that Victoria is mainly a cool climate, it makes sense that heating was the main energy use in a home. Cooling accounted for 5% of the energy cost due to a combination of cooling devices being used for only short periods of time and to the installation of efficient evaporative coolers or split system air conditioners.

Hot water heating was just under a third of energy use. This was driven by relatively high numbers of medium efficiency hot water systems installed and some shower heads having quite high flow rates. Interestingly, 44% of showers had measured flow rates of greater than 10 litres/minute. This is a surprisingly high result given the support provided for installation of low-flow shower heads over the last decade.

Around 4% of homes have a pool or spa, which accounts for a third of the energy use for those homes.

Home size and structure

The average house area of assessed houses was 113 square metres (Figure 4), these houses are relatively small given that the average new house size in Victoria in 2018 was 200 square metres. With many of the 2017-19 assessments being performed on lower-income houses, homes tend to be smaller in size. Currently data is not collected on the number of apartments and units.

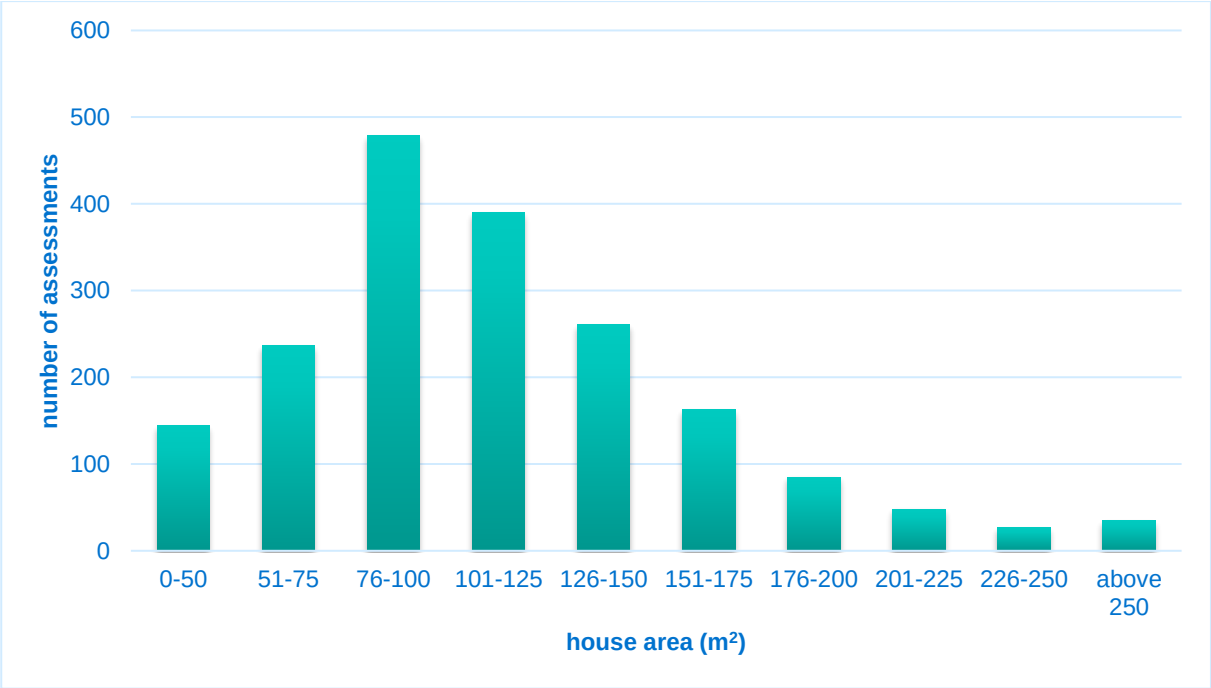


Figure 4 Floor area of the houses assessed

Assessed houses were predominantly brick veneer, on either a concrete slab or timber footings (Figure 5 and Figure 6). 80% were detached houses (they stand alone and have no shared walls).

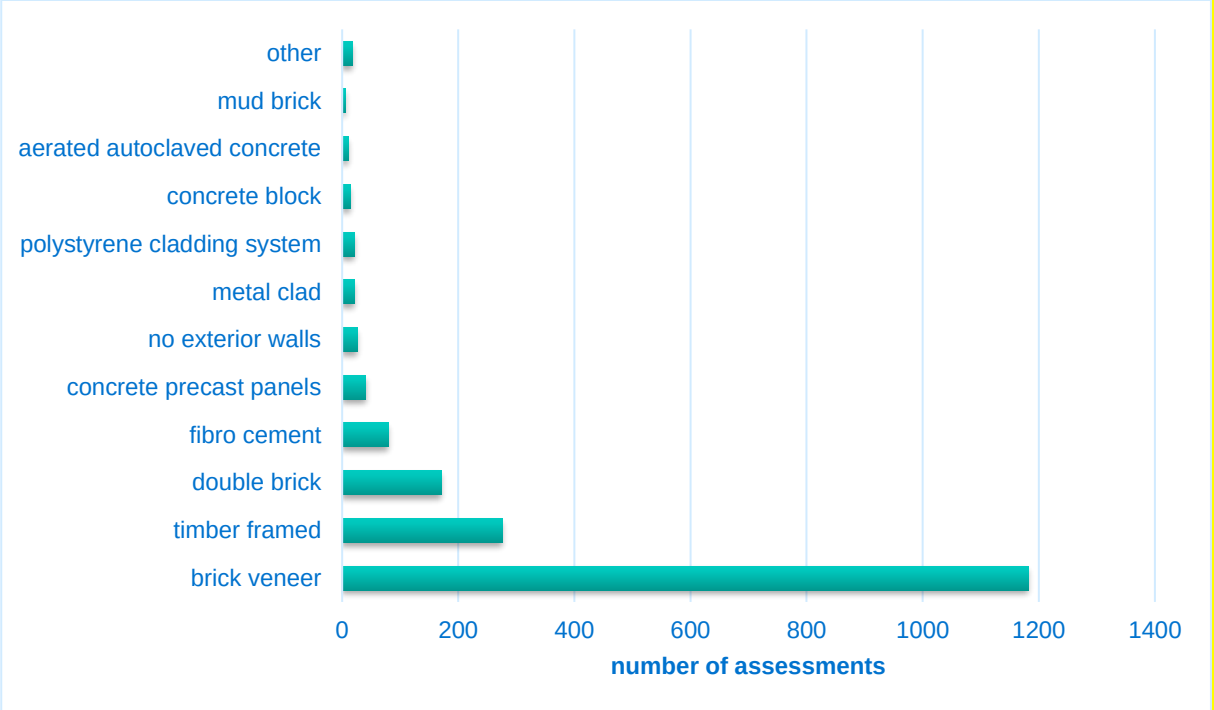


Figure 5 Main wall type of the houses assessed. If a house has more than one wall type, then the predominant wall type is captured here

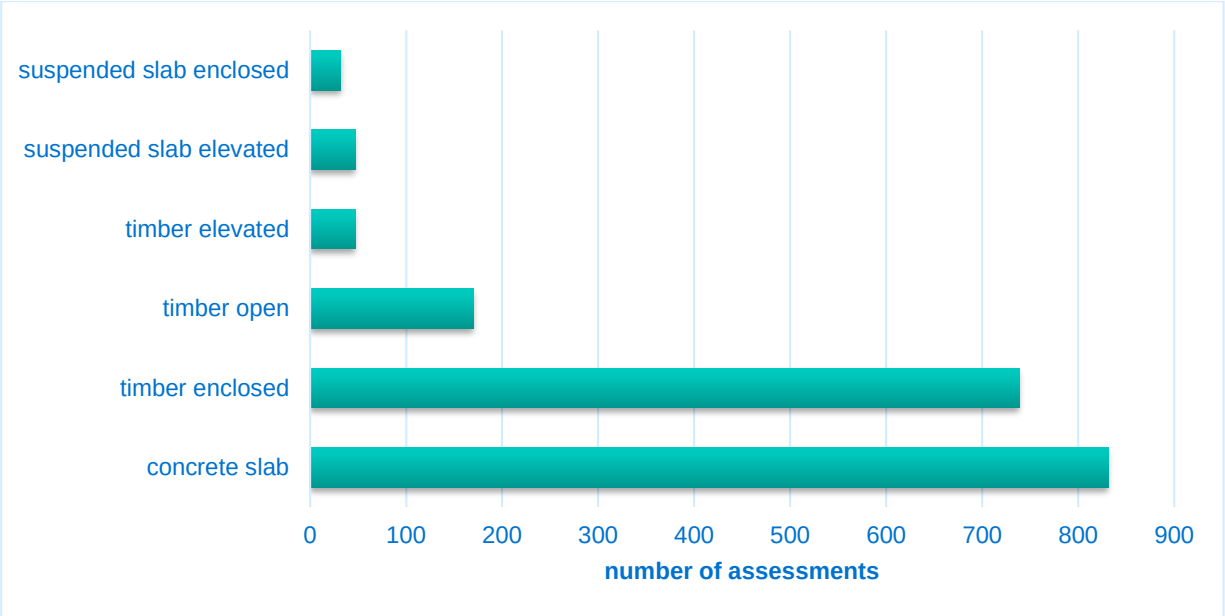


Figure 6 The main sub-floor type of the houses assessed. If a house has more than one sub-floor type, then the predominant sub-floor type is captured here

Hot weather performance

The hot weather rating measures how easy it is to keep a house cool during a hot spell without using air conditioning.

This is important:

- To protect the health of householders during extreme heat events where they have no cooling[4].
- Houses that are easy to keep cool reduce the burden on our electricity system during heatwaves that is created by air conditioning, reducing the risk of blackouts.

Most assessed homes had the lowest possible hot weather rating (Figure 7). This means that 85% of the homes assessed are expected to be very uncomfortable in heatwaves without air conditioning. This is a significant weakness in the Victorian building stock.

The most common issues identified were poor insulation, draughtiness and no external window shading – these all act to reduce the home's resilience to heat. Householders who live in homes with poor hot weather ratings were given simple and affordable suggestions to improve their rating.

[4] Low Carbon Living CR Policy Recommendations to increase urban heat stress resilience

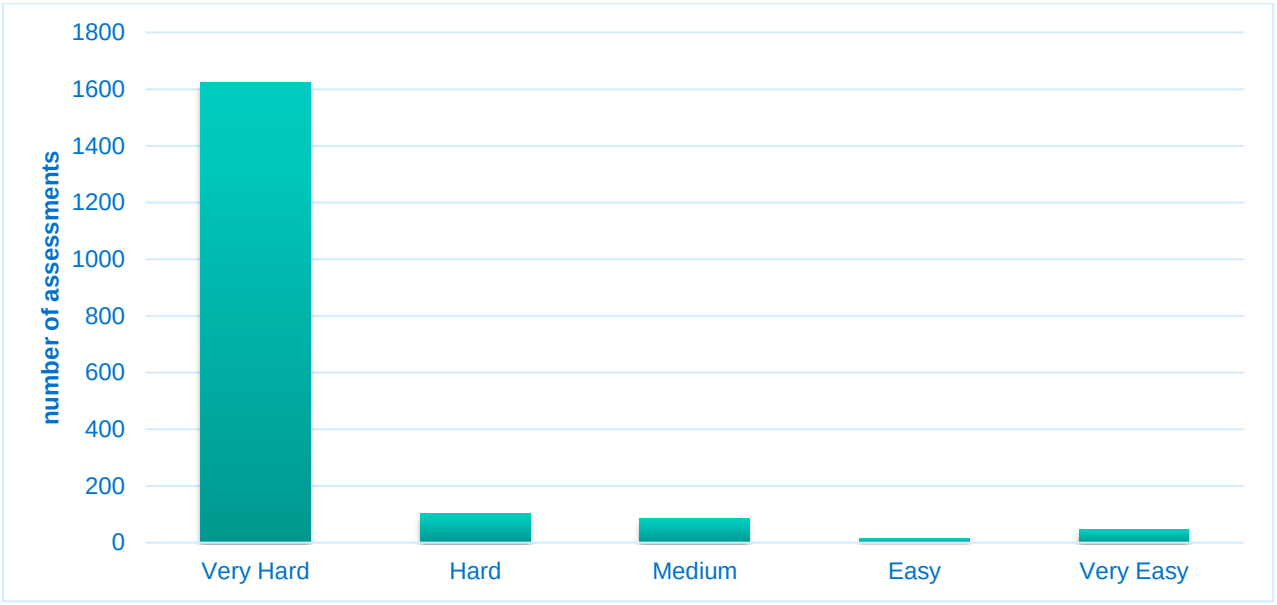


Figure 7 Hot weather rating of the houses assessed. This is a measure of how easy it is to keep a house cool during a hot spell, without using air conditioning

Cold weather performance

The building shell rating is a measure of how well the building shell or thermal envelope keeps in heat in winter and heat out in summer. The highest rating indicates a well-insulated, well-sealed house with high performing windows. A new building that meets minimum building standards should rate at the highest rating (very high) in the Scorecard. Given that residential energy use in Victoria is dominated by heating, the building shell rating is a measure of cold weather performance.

Most of the houses assessed (75%) had a very low or low building shell rating, mainly due to poor insulation and low air tightness (draughts) (Figure 8). This means that these homes are more expensive and difficult to keep warm.

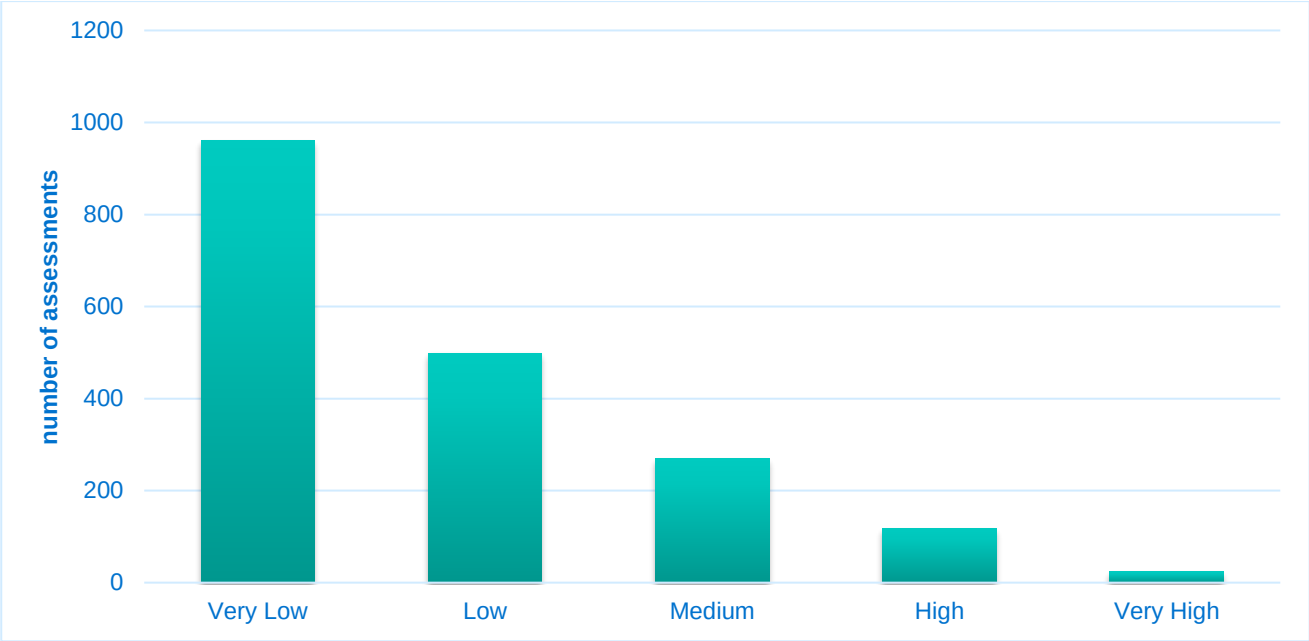


Figure 8 The building shell efficiency rating of houses assessed. Given that Victoria is a heating dominated climate, this is a proxy for the cold weather performance of a house

The relative air leakage area compared against the building shell rating can be seen in Figure 9. This represents the combined area of air leakage sites such as chimneys, exhaust fans and wall vents.

The air leakage area of houses with a 'Very Low' building shell rating was six times higher than that for those with a 'Very High' building shell rating. This indicates the importance of draught-proofing to maintain a comfortable and efficient home.

Air leakage can be a major weakness in older homes in Victoria. Wall vents are common in older homes, along with chimneys that have not been permanently blocked. Exhaust fans that are not self-sealing are found in many bathrooms. Some of these air leakage sites can be easily remedied i.e. caulking the gaps in the wall vents, installing a 'Draft-stoppa' above an exhaust fan. Options like these can be discussed with the assessor during the assessment.

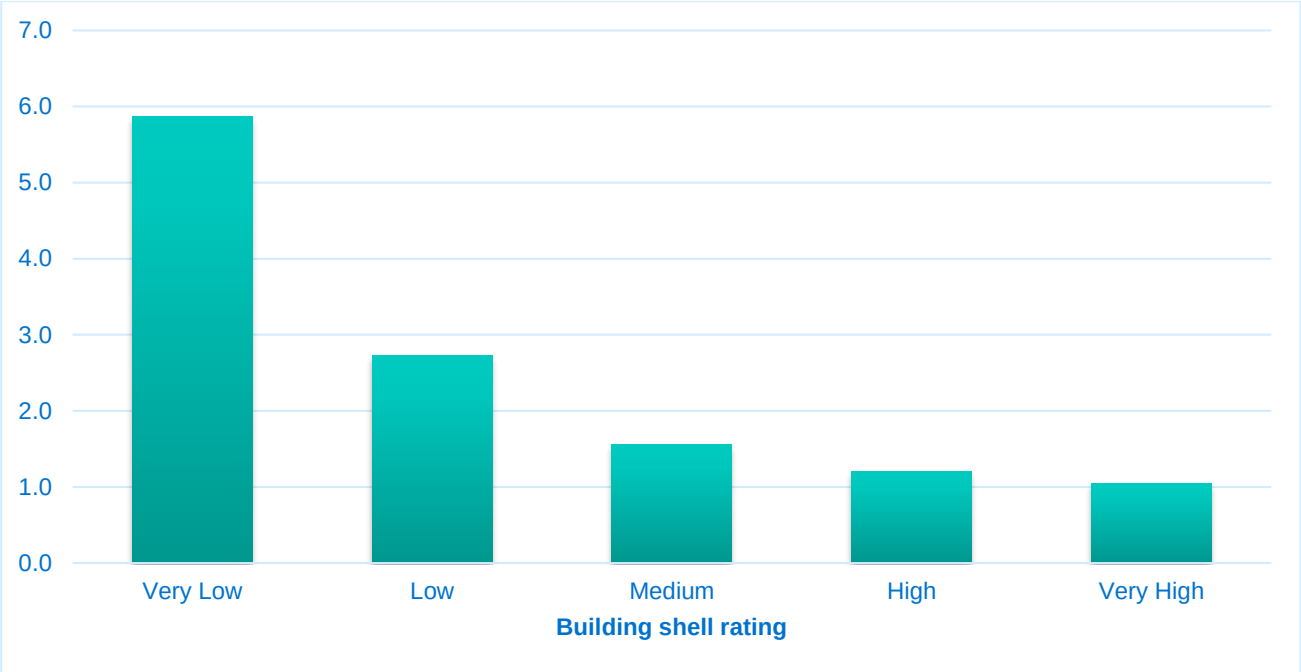


Figure 9 Relative air leakage area versus building shell rating of houses assessed

Insulation

Insulation 'R values' measure the effectiveness of a layer of insulation – higher is better as it impedes heat travelling through it. Insulation in ceilings can be poorly installed or have been disrupted by subsequent work carried out in the roof space. This can have a significant effect on the effectiveness of the insulation but can usually be easily fixed once the householder is aware of it.

During an assessment, an assessor is required to inspect the ceiling insulation if it is accessible. If the ceiling space is not accessible, then rules determine the likely insulation R value based on building standards e.g. if the house was built between 1991 and 2003, then R2 is added. These rules are based on building standards of the day.

As seen in Figure 10, houses predominantly have ceiling insulation at or below R2 and 8% of houses assessed had no ceiling insulation. Having no or very low levels of ceiling insulation will have a large effect on the comfort of a home and running cost.

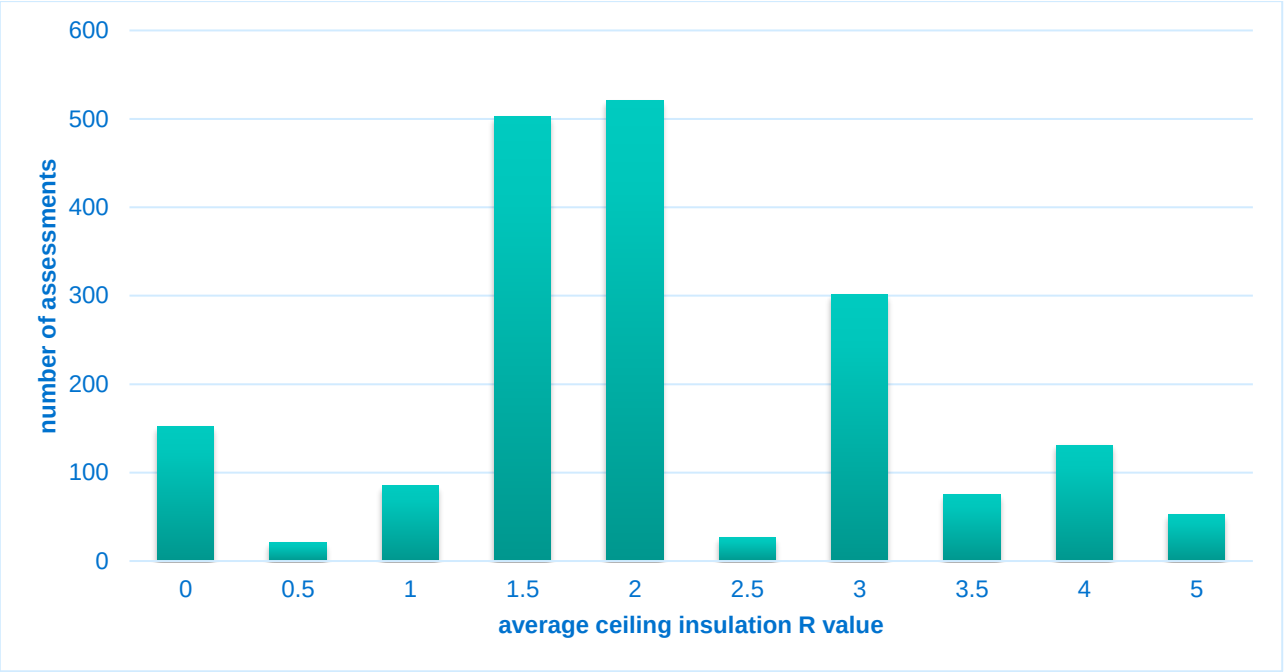


Figure 10 Average ceiling insulation R value for houses assessed. Ceiling insulation is determined by either a ceiling inspection or by using rules determined by the building standards of the day.

Figure 11 shows that there is a strong correlation between the ceiling insulation levels and the building shell rating. This is as expected as the building shell will be ineffective at retaining heat if there is insufficient insulation in the ceiling.

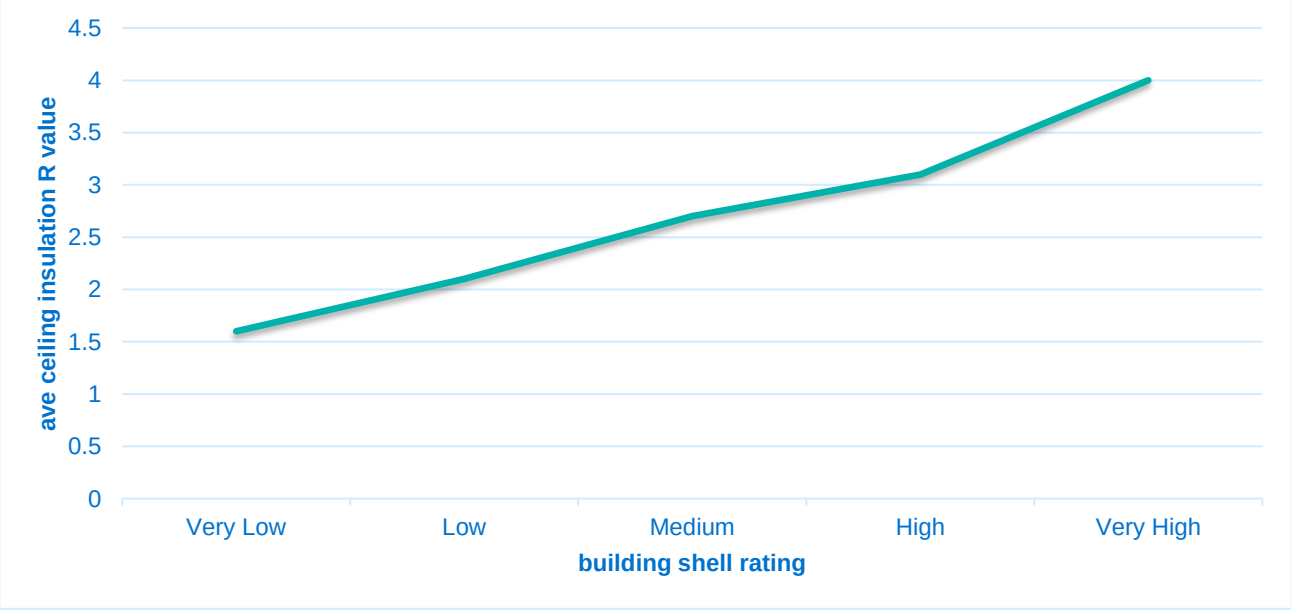


Figure 11 Average ceiling insulation compared to building shell rating

An example of insulation that has been disrupted and hence not providing the expected benefits

Heating

Due to Victoria's relatively cold climate, home heating is usually the largest energy cost for a home.

Victoria is dominated by gas heating, with reverse cycle (electric) heating also significant (Figure 12). This may change over time as highly efficient reverse cycle heating becomes more available.

Most homes assessed were heated by either ducted natural gas (37%), natural gas space (25%) or reverse cycle heating (23%). 66% use gas, 29% electricity and 5% wood as the fuel for the main heater in the house.

Houses can be heated by either central-heating systems that heat most of the house, or single room heaters (space heaters). In the Scorecard analysis, 58% of homes were space heated. Both gas space and reverse cycle space heaters were found to have high to very high efficiency ratings when compared to the best heaters available on the market, as seen in the brackets in Figure 12.

Of the houses that have space heating, an average of 50% of the house is heated. This may equate to only the living areas, or the living areas and the main bedroom. Of the houses assessed, 30% had only one heater in the main living area and no other fixed heating in the house. Occupants of these homes may be heating other rooms using expensive-to-run portable heaters.

42% of houses have central heating. Natural gas ducted systems rated at medium efficiency, partly due to high heat losses through old ducting under houses or in the ceiling spaces, as well as some of the systems being quite old, and hence less efficient to run.

Heating also interacts with the building's shell – for example, a centrally heated home may cost a lot to run if the building shell is poor and the heat leaks out.

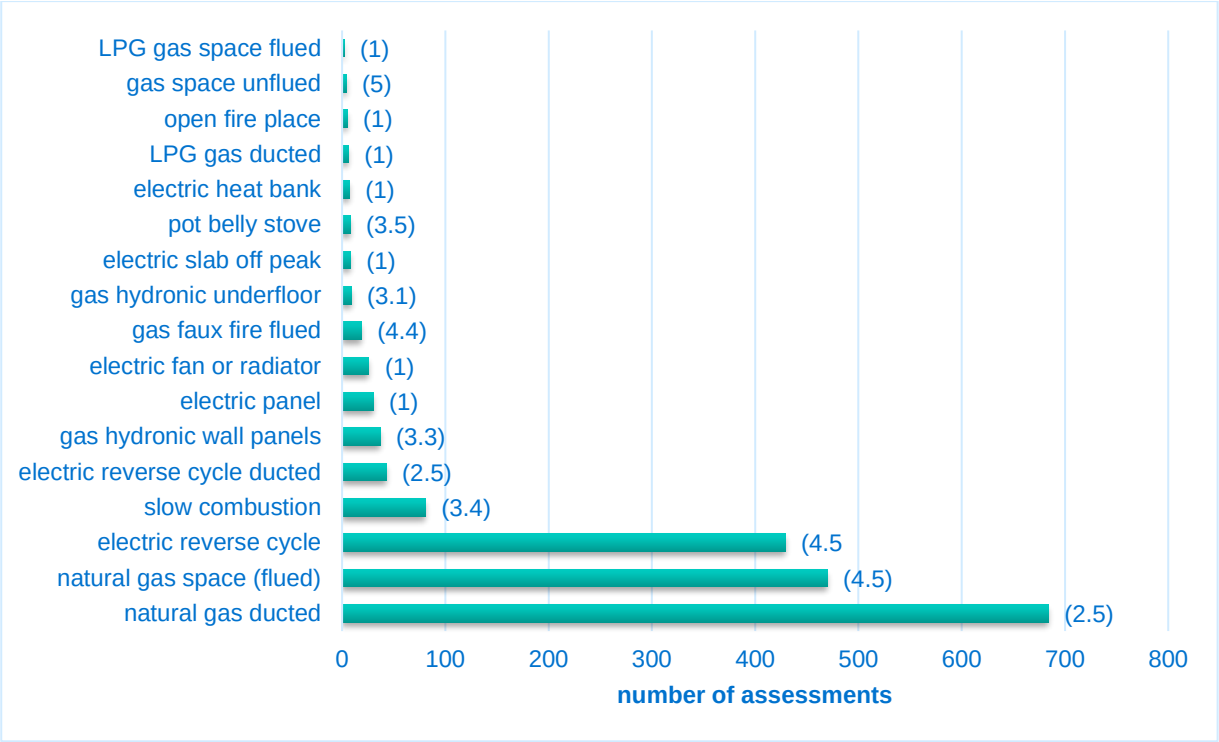


Figure 12 Main heater type in houses assessed. The number in brackets is the average efficiency rating for that type of installed heater. Heater efficiency ratings are 1 – very low efficiency, 2 – low, 3 – medium, 4 – high, 5 – very high.

The appliances in the Scorecard receive a cost efficiency rating that is a combination of how efficient the appliance is and the cost of the fuel type. An example of this is a gas space heater that runs on natural gas will receive a higher rating than the same heater run on LPG, as LPG is more expensive. This can be seen in the brackets in Figure 12.

A very high rating indicates heaters that are the most cost efficient in the market. Around 40% of assessed homes had heaters with a very high efficiency rating (Figure 13). However, 29% had an inefficient heater (rated as very low or low efficiency). These homes have an excellent opportunity to upgrade their heating to a more efficient appliance.

The Scorecard records fixed appliances only; portable heaters are not captured as there is no certain way to know if portable heaters are used. For example, the householder may have just moved in, or heaters may be put away when the assessment takes place e.g. in summer. Also, all Scorecard evidence is objective (not based on personal opinion or behaviour). This avoids houses rating higher or lower than they should due to mis-reporting.

If no heater is entered, the tool assumes that the largest single room in the house is heated by an electric heater. The electric fan or radiator input was found in 1% of the houses assessed. This is either due to the type of heater being found, or because no fixed heating appliance was entered (these have the same input in the tool). The ability to distinguish between these will be available in future versions of the tool.

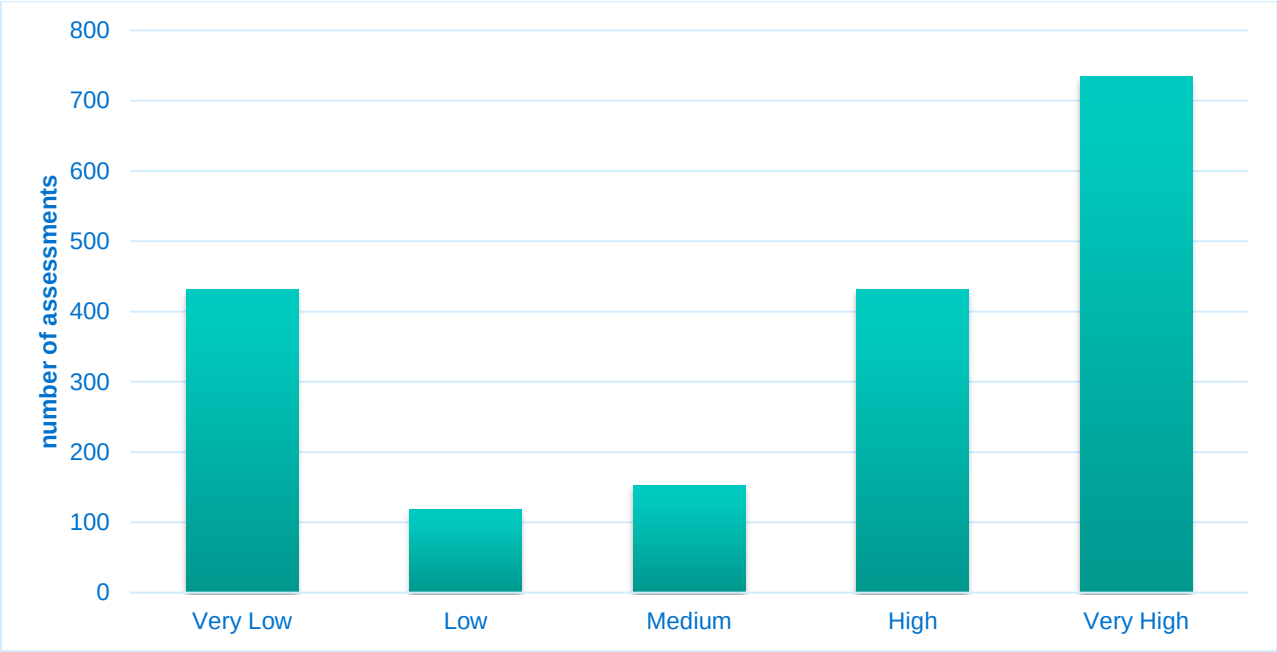


Figure 13 Main heater efficiency rating

Cooling

Air conditioning can be important to maintain home comfort and health in hot weather. There are significant benefits to improving air-conditioning efficiency, as air-conditioning is a high electricity use. Peak loads are created in summer when air conditioners are switched on during very hot days, which drives the potential for black-outs.

So air conditioner efficiency is very important although it accounts for an average for just 5% of the annual energy use of assessed houses in Victoria (Figure 3).

From the houses assessed, reverse cycle air conditioners are most common (50%), then ducted evaporative (15%) followed by air conditioners that are cooling-only (12%) (Figure 14). These latter may be older systems like the box style that sit through a wall or a window.

45% of the coolers installed in houses rate at very high or high efficiency, 36% achieve a very low rating (Figure 15).

20% of houses have no fixed cooling.

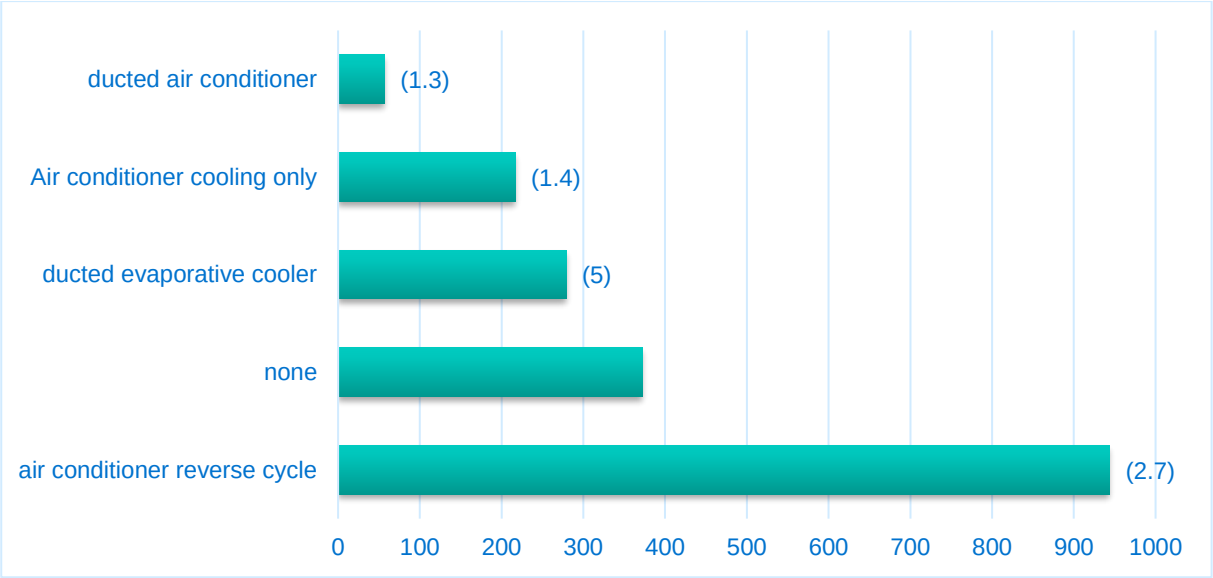


Figure 14 Main cooler type in assessed houses. The number in brackets is the average efficiency rating for that type of installed cooler. Cooler efficiency ratings are 1 – very low efficiency, 2 – low, 3 – medium, 4 – high, 5 – very high.

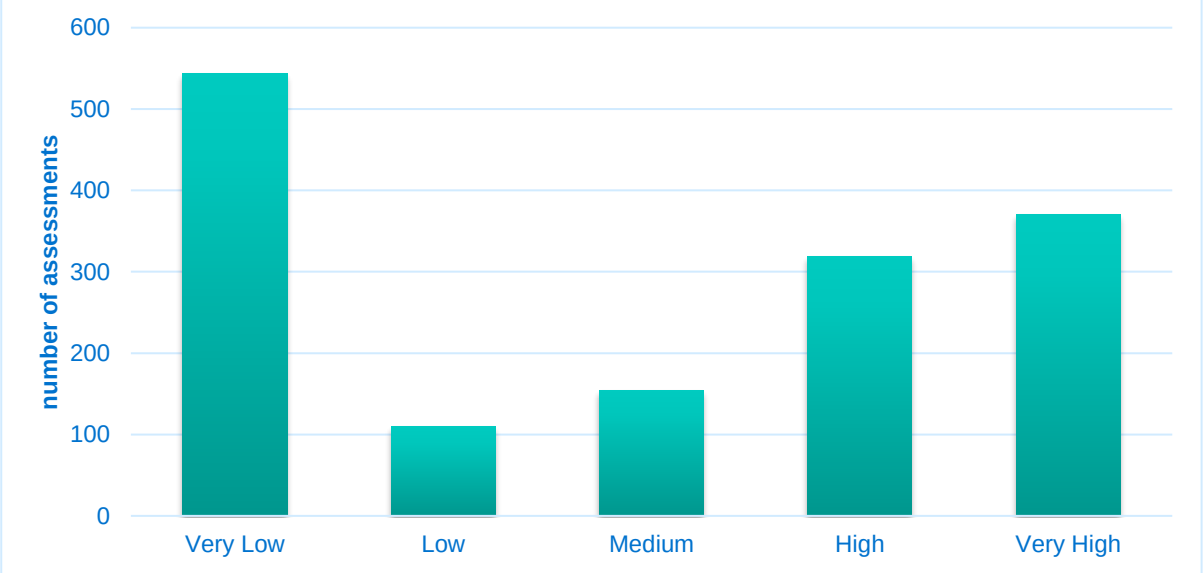


Figure 15 Main cooler efficiency rating for houses that have a cooler installed

Hot water

Hot water heating accounts for 29% of a home's energy use on average. Interestingly, the data shows that shower roses are an area that needs more attention.

In Victoria about 50% of the hot water systems were found to be natural gas storage, 15% were natural gas instantaneous and 11% off-peak electric systems (Figure 16). About 14% of houses have a solar hot water system.

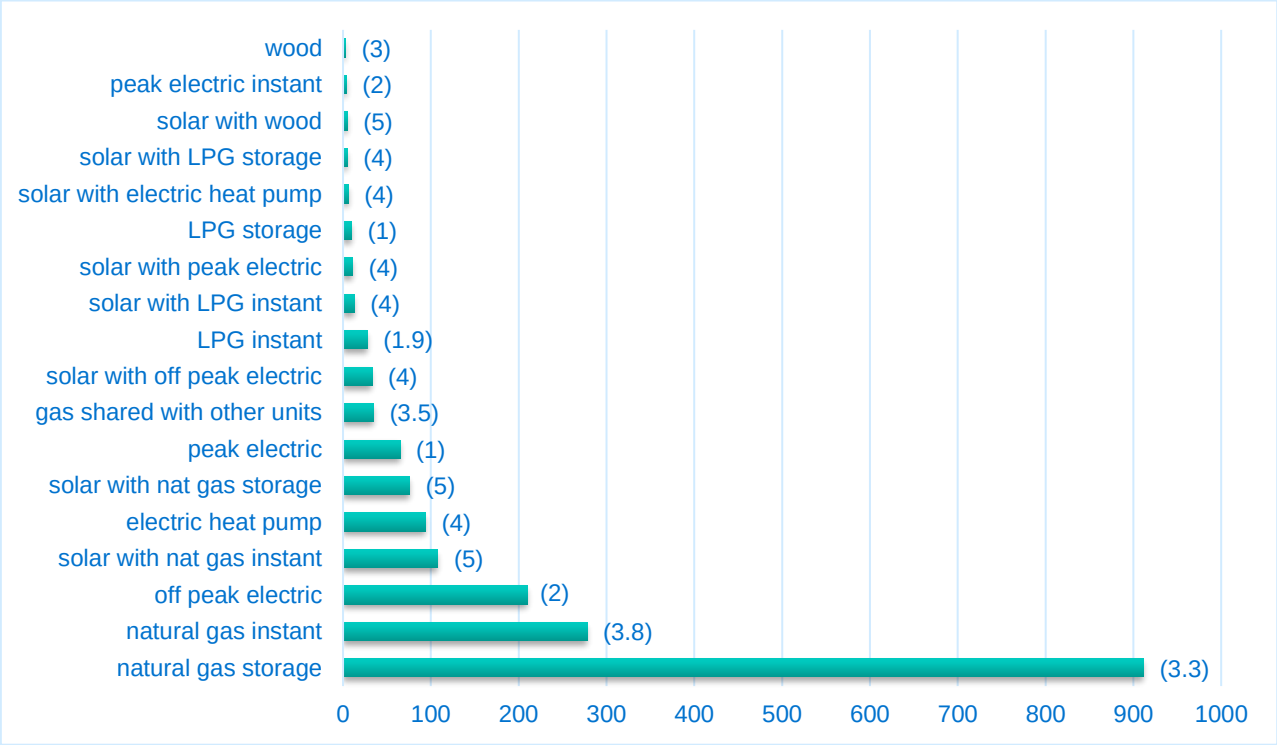


Figure 16 Main hot water system installed in houses assessed. The number in brackets is the average efficiency rating for that type of installed system. Hot water efficiency ratings are 1 – very low efficiency, 2 – low, 3 – medium, 4 – high, 5 – very high.

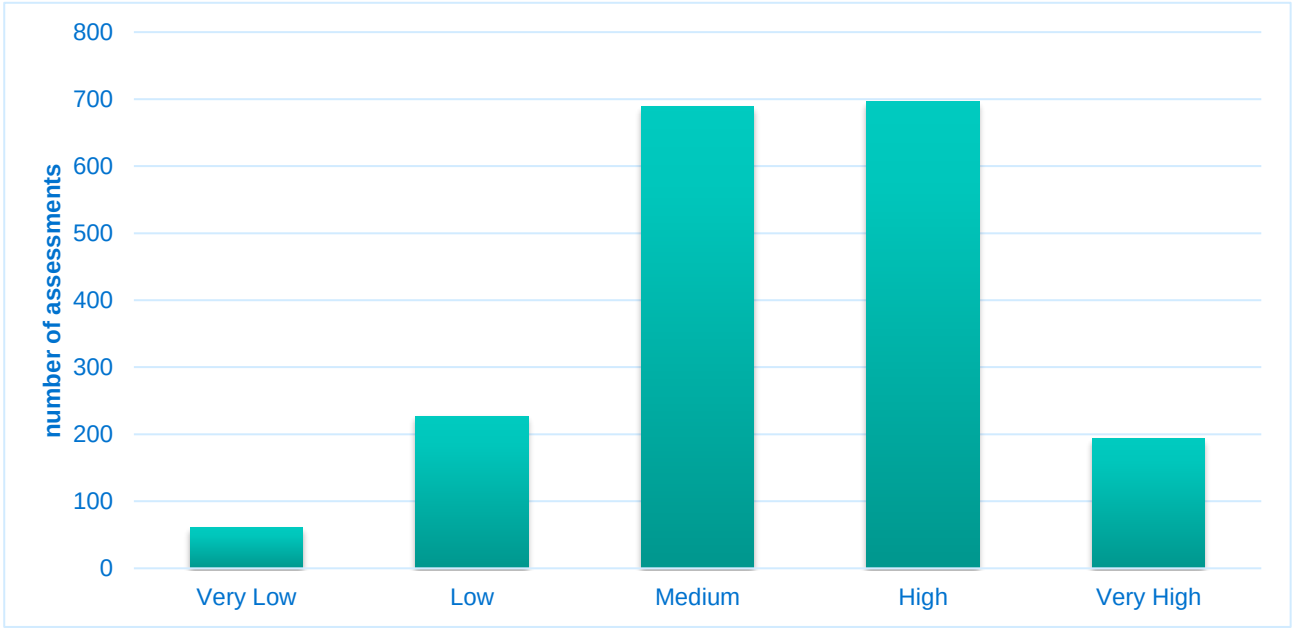


Figure 17 Main hot water system efficiency rating for assessed houses

Around 52% of homes would benefit from a more efficient hot water system; generally, they have medium rating or below (Figure 17). Solar hot water systems are highly efficient, and all the very high rated systems have solar.

45% of homes would benefit from a more efficient shower rose, as the measured shower flow rate was greater than 10 L/minute (Figure 18). This is a surprising finding as there have been many programs upgrading shower roses, with an opportunity for further improvement. Changing the shower rose is a quick and easy fix that will save households money with only a small outlay.

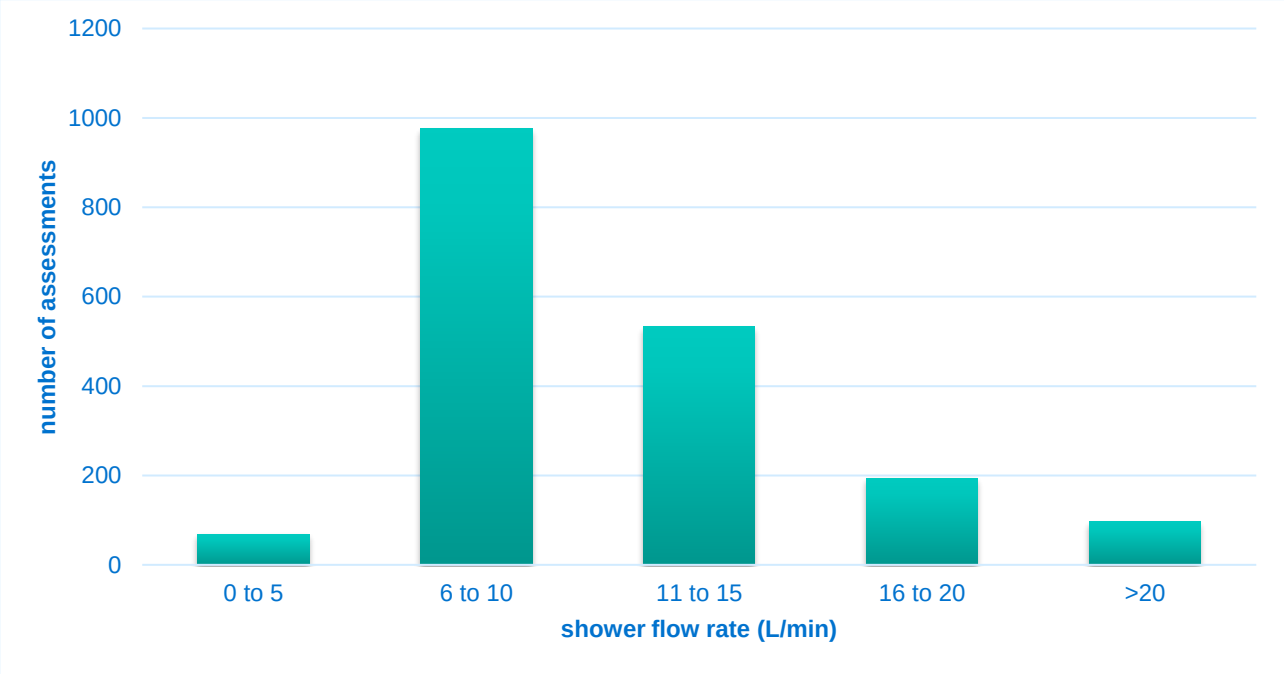


Figure 18 Measured shower flow rate

The type and star rating of hot water systems needs to be input into the Scorecard tool

Lighting

Most Victorian homes now have efficient lighting (Figure 19). 95% of homes receive a very high efficiency rating for their lighting which indicates that there are few houses that still have halogen downlights installed.

This finding indicates that recent Victorian Government schemes to replace inefficient halogen bulbs with more efficient bulbs have been very effective. The Victorian Energy Upgrades (VEU) program has provided significant incentives for upgrades; this looks to have generated major improvements.

Halogen downlights have three major impacts on the efficiency and cost to run a house – the energy cost to run the bulb, the air leakage from the downlight fitting, and the displaced insulation that is required within the building regulations to minimise the risk of fires.

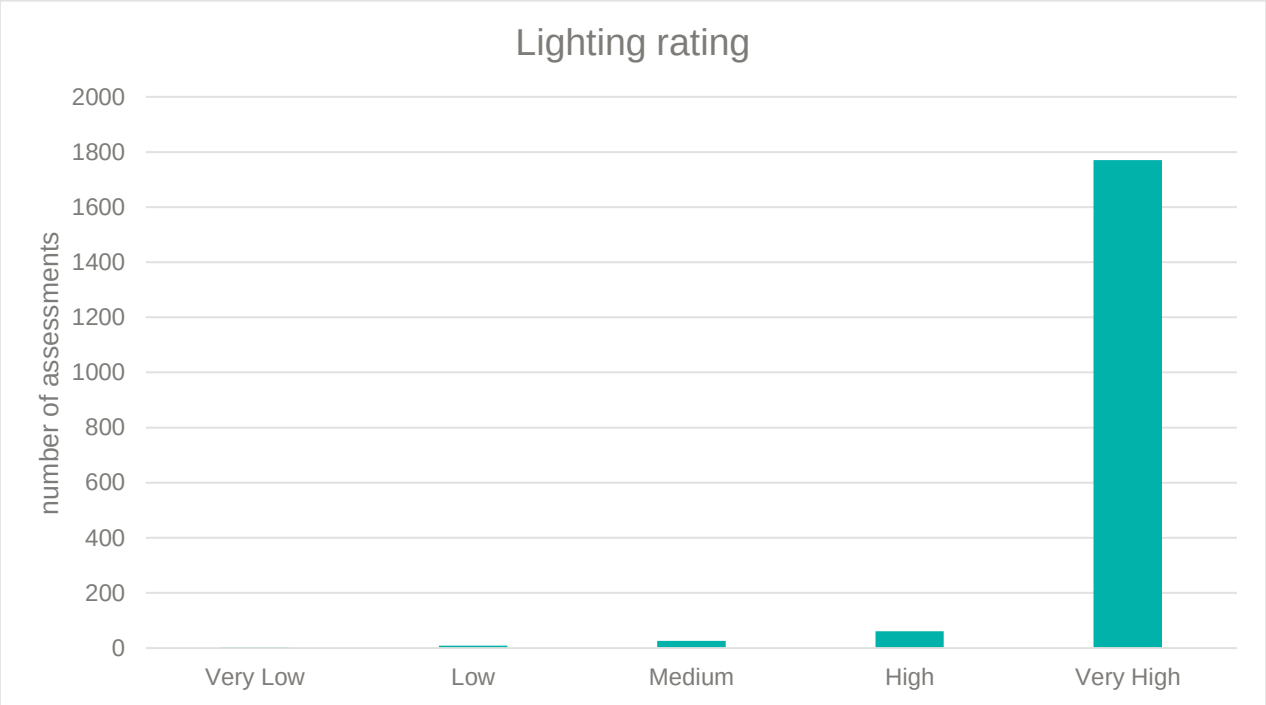


Figure 19 Lighting efficiency rating

Rooftop solar (PV) systems

The average star rating of houses with PV is 6.7 stars, compared to 5 stars for houses without.

Of the 20% of houses that have PV systems installed, the average size is about 2kW. These houses may have scope for additional PV panels.

Star rating analysis

All of the houses that received a certain star rating were grouped together and the characteristics determined in relation to the other ratings.

Using this method, it was seen that as the star rating increased, the average floor area of a house decreased. This occurred up to 7 stars only (Figure 20). This trend was expected as the Scorecard star rating reflects the running cost of homes and, in general, larger homes will have higher running costs.

From 7 stars onwards, the decreasing trend of floor area is reversed, and the average size of the houses at higher star ratings gets bigger. In addition, above 7 stars, the effect of PV system installation can be seen. PV systems generate energy to be used by the household, and unused energy is fed back into the electricity grid, earning money for the householder. Both household use and feed in benefits are accounted for in the Scorecard modelling. So even though the houses above 7 stars get larger, the effect of the PV system supports lower running costs of the house. All of the 9 and 10 star homes have PV installed.

Figure 20 Average house area (green) and percentage of houses that have PV (blue) for each star rating

A house with a large glazed area can be difficult to heat and cool effectively. For the houses assessed, the glazed area in a house showed a strong relationship to the star rating (the cost to run the house) (Figure 21). As with house area, this relationship held until 7 stars was reached. Houses that achieved higher than 7 stars were found to have larger glazed area than a 7 star house.

9% of houses had high performance glazing installed (either double gazing or secondary glazing), with an average of 70% of the windows having high performance glazing for these houses. Over 50% of the 10 star houses had high performance glazing installed.

Figure 21 Average glazed area in houses assessed and percentage of houses that have high performance glazing

The hot weather rating slightly increased as the overall house star rating increased, however there is not a strong relationship between the two ratings (Figure 22). This is not unexpected as the overall star rating represents annual energy cost, whereas the hot weather rating represents comfort in hot spells. In Victoria energy costs are more impacted by heating during colder months than cooling during short heat waves. This

shows how important it is to have both ratings and a skilled assessor to support householders understanding the two ratings and how to improve them.

10 star houses in general perform better during a hot spell that other star rated houses, but most houses would benefit from improving their hot weather rating.

Figure 22 Average hot weather rating of houses assessed versus star rating. Hot weather ratings are the ease of keeping a house cool during a hot spell: 1 – very hard, 2 – hard, 3 – medium, 4 – easy, 5 – very easy.

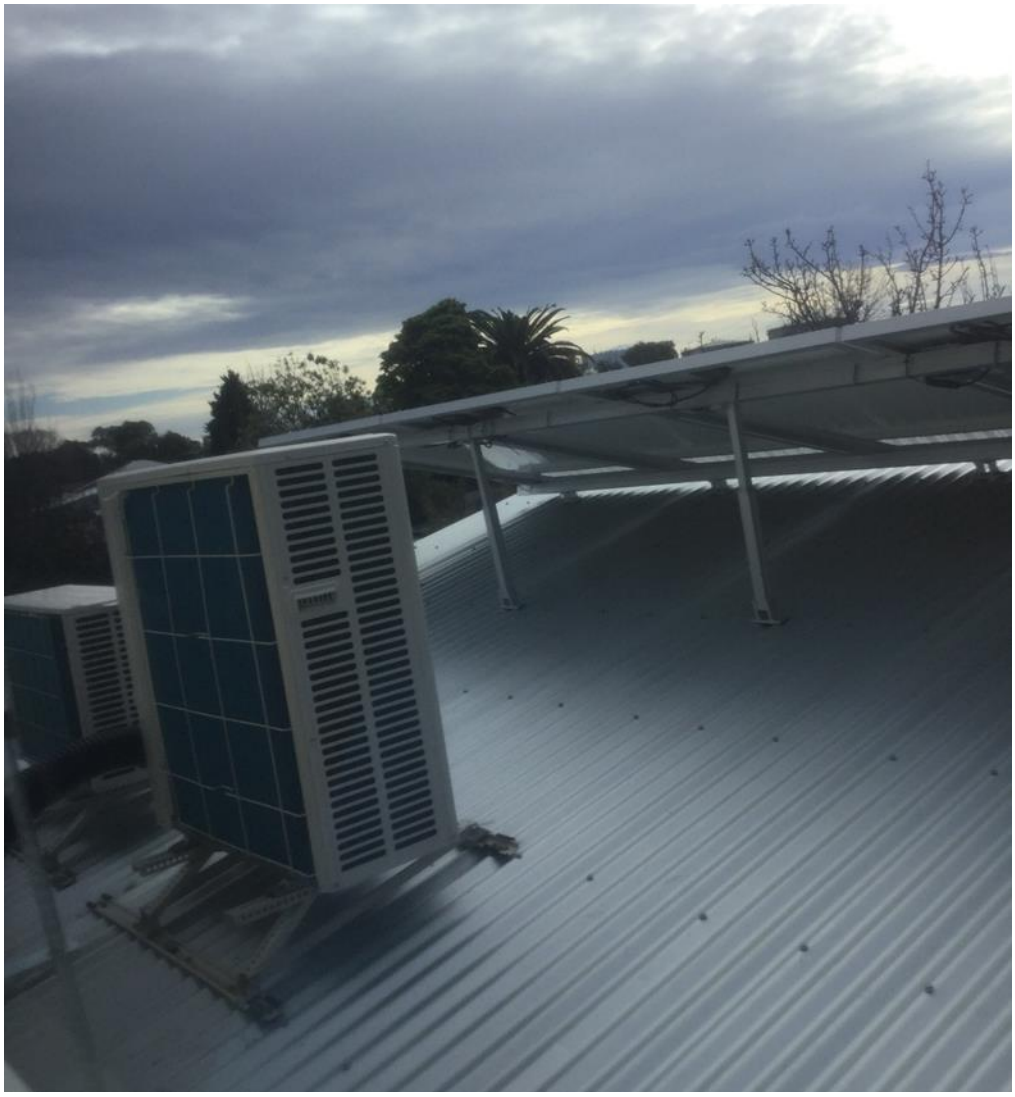
There is a relationship between overall star rating and building shell rating (Figure 23). A low building shell rating correlates with a low overall star rating, meaning they are more expensive to heat and cool.

Figure 23 Average building shell rating versus star rating. Building shell ratings are 1 – very low, 2 – low, 3 – medium, 4 – high, 5 – very high.

Comparison of the overall star rating with the rating of house features follows.

Star rating	House area	Glazed area	Hot weather rating	Building shell rating	Effect of PV	Cost to run
1 star	Largest	Largest	Worst	Worst	Small	$$$$
7 star	Smallest	Smallest	Better but still poor	Medium	Small	$$
9 or 10 star	Medium	Medium	Better but still poor	Best	High	$0 or less

From the table and Figures 20 to 23, the feature that has the greatest impact on star rating, and the largest impact on the cost of running a house, is the building shell rating i.e. as the building shell rating improves, the star rating gets higher. This relationship does not hold for house area, glazed area or hot weather rating. Installing a PV system will reduce energy costs but having a very good building shell rating will ensure that any running costs are minimised, regardless of the appliances installed. This is more likely to lead to a neutral or cost positive house.



Solar panels and air conditioning units on the roof of a house

How much does a home cost to run?

The Scorecard rating indicates the average energy cost to run fixed appliances in a home. A 10 star home is estimated to earn money – the generation of solar energy will more than offset the energy used in a home.

The Scorecard does not model the exact energy bill of a house as it is dependent on householder behaviour, additional appliances that may be used, and connection fees from energy retailers. It's much more useful to compare houses and look at the home's fixed features, because this allows the home owner to improve home features that are a major driver of energy costs.

In Melbourne, a 3 star home will cost on average $1,773 in energy costs to run the fixed appliances per year.

This considers the use of electricity, gas, wood, LPG and any PV generation. For comparison, the Essential Services Commission's *Victorian Energy Market Report 2017-18,* reports that a typical home in north-west Melbourne had an electricity bill in the range of $1,074 to $2,158 and a gas bill in the range of $1,172 to $2,117. These values incorporate fixed supply charges and also include energy costs for non-fixed plug-in appliances that are not incorporated in the Scorecard results.

Star	Average annual energy cost to run a home
10	-$ 222
9	$ 0
8	$ 266
7	$ 532
6	$ 798
5	$ 1,064
4	$ 1,330
3	$ 1,773
2	$ 3,546
1	$ 5,319

How much can I save by upgrading?

The Scorecard assessor provides advice on the upgrades that are the best value for a particular house and household circumstances. The assessor considers the condition of the house, householder plans and opportunities to upgrade, financial constraints and personal requirements, such as health issues.

For example, they may provide a plan including:

- quick fixes like window coverings and draught proofing
- behavioural actions that can assist in improving comfort without cost, e.g. closing doors and using door snakes to keep heat in the main rooms
- a longer-term cost-effective plan, e.g. the best hot water system to install when the old one fails
- renovation advice to make major improvements

This tailored advice is a major benefit of a Scorecard assessment.

It is also interesting to consider the financial benefit of improving a home rating. By examining Scorecard data collected to date we can get a picture of what an 'average' benefit can be.

Calculation of Energy savings

If you take a typical 3 star home, which will have a 3 star ducted gas heater, an evaporative ducted cooler, a 3 star gas hot water system and draughts which may be wall vents and unsealed fans, the calculated fixed appliance running cost are $1,773 per year for heating, cooling, hot water heating, lighting and any PV.

An upgrade for this house from 3 stars to 10 stars could include: gas ducted heater upgrade to higher efficiency (6 stars), gas hot water system upgrade to higher efficiency (6 star) instantaneous, draught sealing and installing a 5 kW PV system. The average cost for these upgrades is $11,800.

The annual energy cost saving from 3 stars to 10 stars is $2,000 per annum. The payback period is approximately 6 years.

The package consists of ceiling insulation upgrade to R4 ($800), air leakage sealing ($1000), Ducted heater upgrade to 6 stars ($3500), hot water upgrade to 6 star continuous flow ($1500), and 5kW solar system ($5000).

Upgrade costs for insulation and air leakage are based on Energy Efficiency Upgrade Potential of Existing Victorian Houses, Sustainability Victoria, 2015.

Solar pricing based on Solar Choice. Gas appliance upgrade pricing is based on retail pricing of units and estimates of installation costs. All installations are assumed to be uncomplicated. Assumes no gas line upgrades are required.

Running cost savings are based on the Scorecard methodology, see Technical Basis of the Victorian Residential Efficiency Scorecard – Version 1 – January 2018.

Who are our assessors?

Scorecard assessors are the face of the program. They are skilled and experienced and work with householders to improve the energy performance and comfort of their homes. To become accredited, assessors must complete training and an accreditation process that includes passing an examination.

Work arrangements for assessors can vary. Some assessors work for themselves, some for not-for-profit organisations or for private businesses.

The program has more than 40 accredited assessors.
Here we profile two of our assessors and find out about what brought them to the program.

Belinda Baker
Belinda has been involved in reducing energy bills for business and residential customers for over 10 years through her company, U-Pocket. She sees Scorecard assessments as a way of really assisting householders to reduce their bills. U-Pocket was already completing energy assessments in homes, and the Scorecard provided a way to standardise these energy assessments and provide consistency between assessors. It also provided the customer with greater confidence that the rating is government overseen and audited.

'I was accepted into the accreditation process based on previous experience and industry knowledge. I complete Scorecard Assessments for U-Pocket customers, as well as completing the Energy Savvy Upgrades program, assisting customers with both assessments and upgrades. U-Pocket has also completed a pilot with real estate agents to use the Scorecard Certificate as a sales tool when selling a property.'

Belinda says, 'I enjoy being able to clearly show customers where their home's energy is being used and how they can reduce their bills with upgrades that will not only make a difference to their hip pocket as well as their comfort level.'

Mal McKelvie
Mal became a Scorecard assessor through the Baw Baw Sustainability Network (BBSN), of which he is a member. He saw that being accredited would be useful for their home energy assessment work and that it would stand the Network in good stead for future grant funding opportunities.

Mal had been doing home energy assessments on behalf of BBSN for some time before applying to become a Scorecard assessor. ‘I was mostly self-taught but also had some home sustainability and business energy auditing training. I was accepted into the accreditation process based on experience and a small amount of formal training.’

Mal is currently a member of the Scorecard Quality Advisory Panel. As part of that role, he conducts assessments and volunteers his time mentoring other assessors, and trainee assessors.

Mal likes helping people reduce their energy use to make their homes more comfortable. He says ‘I find it rewarding because I feel I am taking action on climate change. Using the Scorecard adds weight to the assessment and advice provided, and it is an important part of the move to much more energy efficient homes in Victoria.’

Who is using the Scorecard?

Scorecard assessments across Victoria

220 Scorecard assessments have been carried out in regional and rural Victoria, with the remainder 1,650 assessments carried out in metropolitan Melbourne.

Paid versus free assessments

In its first year, Scorecard assessments were delivered by not-for-profit organisations only. From May 2018 businesses were also able to deliver assessments.

Since tracking began in October 2018, 10% of assessments have been paid or part-paid for by householders. Assessments have otherwise been supported through other projects, funded by government, councils and businesses, and often target low income households.

Victorian Government supported assessments

The Scorecard provides an effective way to ensure home upgrades are cost-effective and appropriate for the household. This benefits the delivery of programs as it's easier to show that funds have been efficiently allocated and supports evaluation of program impacts.

In April 2019, the following programs are using the Scorecard.

Program	Number of Scorecard assessments	Who is helped
Affordable Retrofits	800	Vulnerable households including owner-occupied, privately rented and community housing
Energy Smart Public Housing	200	Public housing residents
Victorian Healthy Homes	1000	Householders with specific health conditions
Latrobe Valley Home Energy Upgrades	200	Low income households in Latrobe Valley and Gippsland

Other Scorecard program users

The Scorecard has been used to support a broad range of householders from vulnerable consumers to households that want to lead the way with a high rating house that is comfortable and low cost to run.

Scorecard has been used in:

- Sustainable House Day, an event of the Alternative Technology Association (trading as Renew Australia) in 2018. 30 high performing homes open to the public were assessed with further information available during the day.
- Advertising of 10 star homes built by several leading builders and used in advertising.
- Community housing organisations have used the Scorecard to develop an understanding of their housing stock, and to make more informed decisions about improvements that maximise energy efficiency and comfort for residents.
- Advertising houses for sale or rent by several real estate agents to demonstrate low energy running costs.
- Geelong Sustainable House Day, an event of Geelong Sustainability in 2018, showcased an unrenovated home and information on how the Scorecard can inform cost effective upgrades.

The Scorecard website also features case studies and short videos of households that have used the Scorecard.

The featured households use the Scorecard to:

- reduce high energy bills
- guide a renovation
- improve an uncomfortable home
- assist landlords and renters
- capitalise on buying, selling and building a home.

A house that was sold using the Scorecard rating for marketing

Customer surveys and feedback

Everyone who receives a Scorecard assessment has an opportunity to provide feedback. It's a key way to understand how the program is going.

Customers can comment on their assessment experience via:

- online survey
- phone survey
- Scorecard help line and email

Phone surveys

Phone surveys of assessed households were conducted in January, April and November 2018. A total of 229 people were surveyed. The response rates to the phone surveys have been extremely high, increasing to 82% by November 2018. This is higher than expected and indicates householder engagement in the assessment and willingness to share their experience.

91% were extremely or very satisfied with the assessment process and the program.

The reasons for getting an assessment were found to be:

Reason	%
Curious about energy efficiency of the home	65
To reduce energy bills	62
To reduce energy consumption / greenhouse gas emissions of the home	53
To improve comfort level of a home	42
Planning renovations / property upgrades	1
Other	6

The satisfaction rate with the assessment process and experience has overall been extremely high (Figure 24).

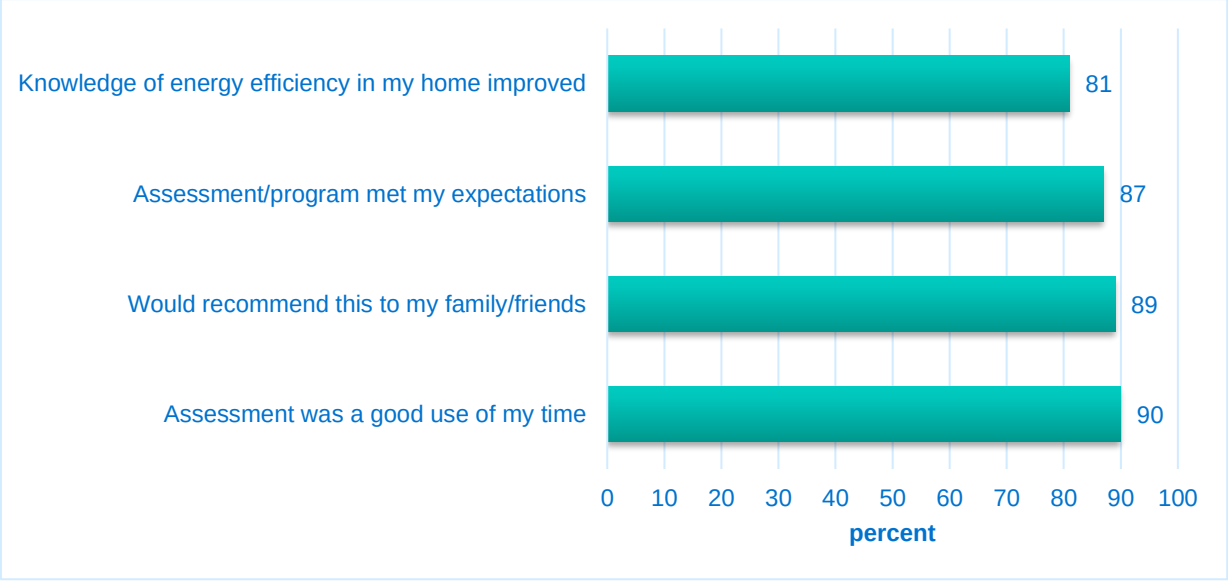


Figure 24 Results from the customer survey about the value of the Scorecard assessment

Scorecard assessors were also very well regarded and seen to add value to the overall experience.

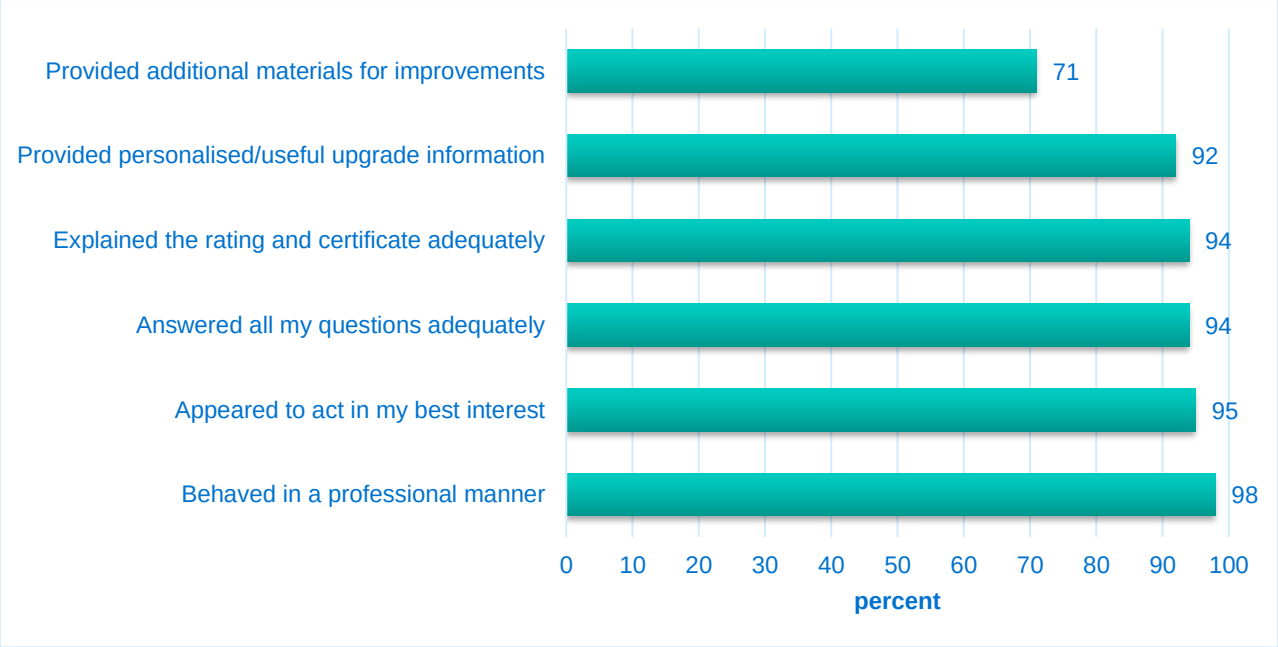


Figure 25 Results for the customer survey that rated how the assessors met expectations

92% of respondents strongly agreed the Scorecard was easy to understand and 82% said that the hot weather score accurately reflected how the home performs (Figure 26).

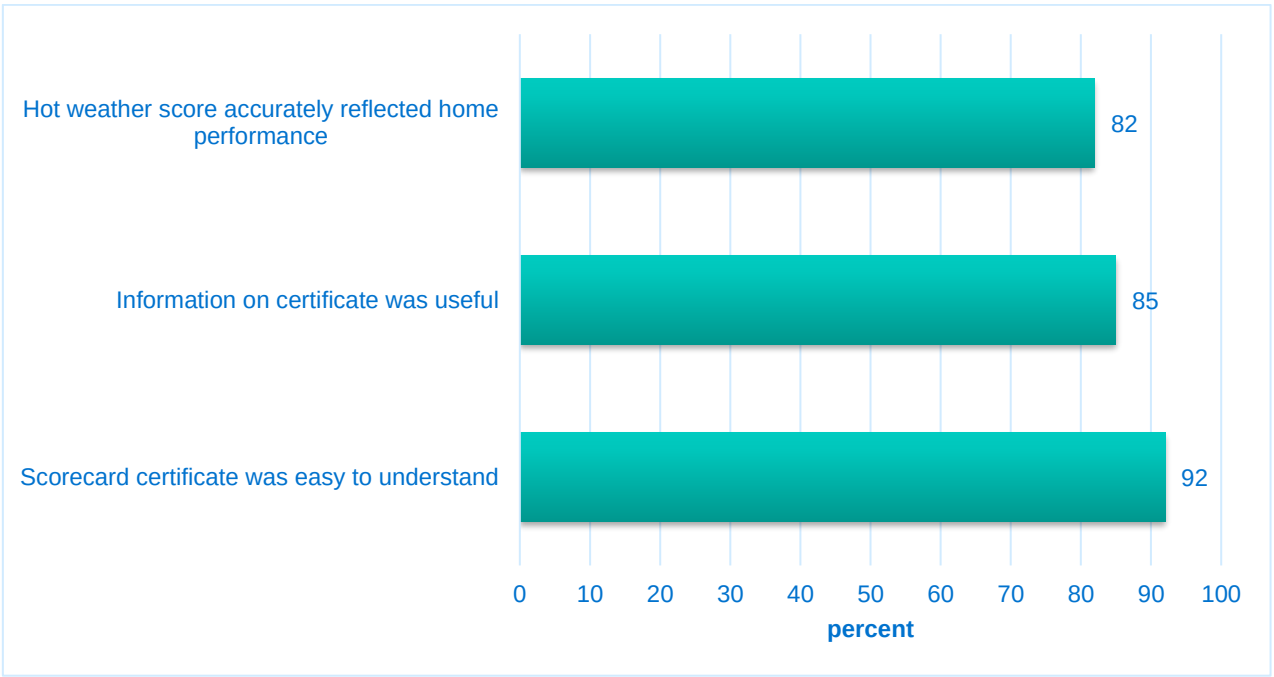


Figure 26 Results from the customer survey analysing the Scorecard certificate

Following the assessment, 52% of the respondents had already acted, while 26% intended to act within three months of the assessment (Figure 27).

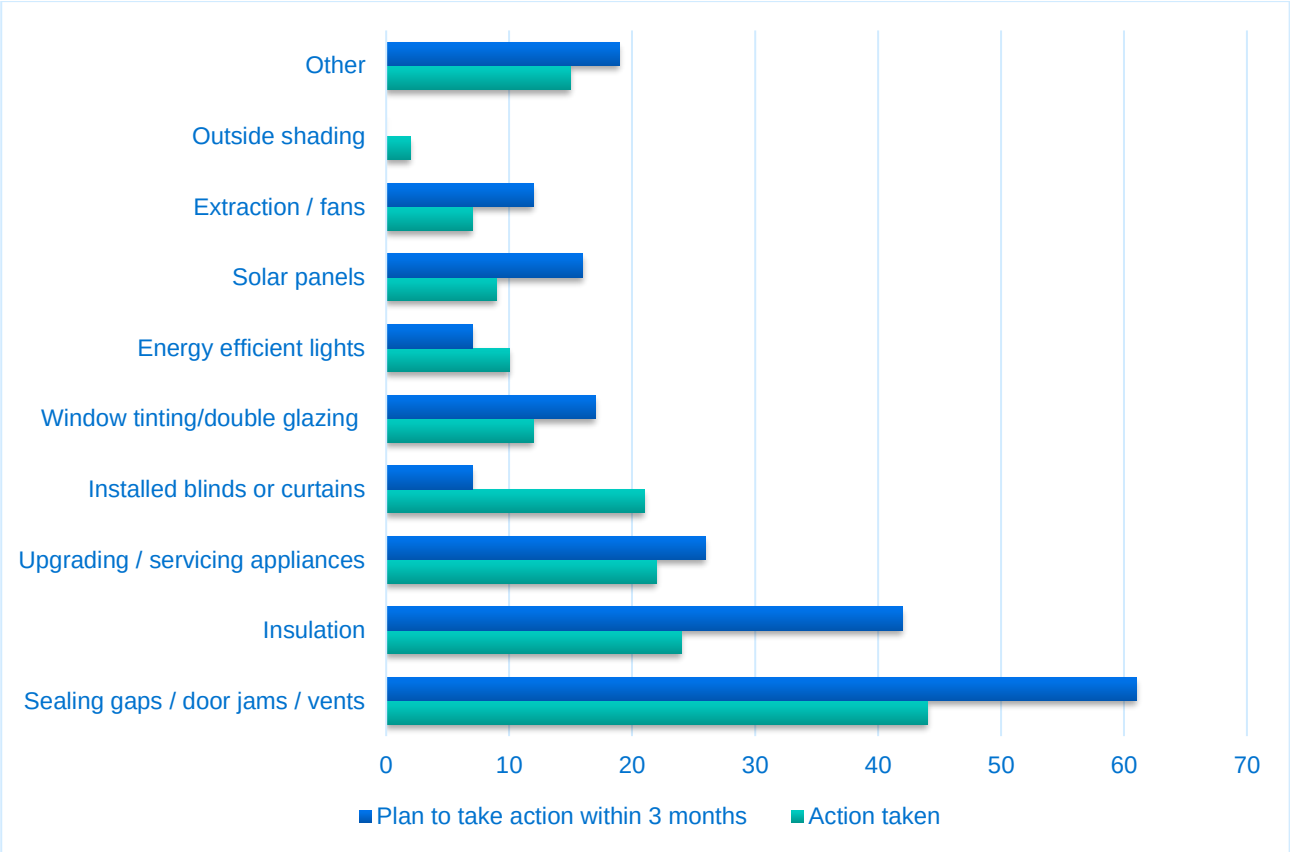


Figure 27 Results from the customer survey showing what actions had been taken or would be taken as a result of the assessment

Of the respondents who did act:

- 51% said it had increased their home's comfort;
- 24% reported that their energy consumption had decreased, while
- 14% reported that their energy bill had decreased.

It is also worth noting that on average 50% of the respondents haven't been able to confirm whether their energy bills or energy consumption have decreased, as they were not checking their usage on a regular basis.

In addition, when asked how upgrades were financed:

- 78% were upgraded from personal savings
- 6% from credit card,
- 2% from mortgage (equity drawn down), while
- 14% found other sources, including from fully paid or partially paid upgrade programs.

Finance was quoted as the biggest barrier to upgrades.

Online survey feedback

All customers who have had an assessment are directed to an online survey when they receive their certificate via email. Since October 2017, 63 people have responded (~3%). The results from the online survey were consistent with the phone survey results.

Highlights include: 90% of respondents said that the Scorecard met their expectations, 87% said they were going to act as a result of the Scorecard recommendations.

92% Satisfied with the accuracy of the star rating their homes received.

Assessor audit results

Quality control is critical to maintain trust in a program.

Most assessors that are actively carrying out assessments have been audited to check how accurate their Scorecard tool inputs are. Information from desktop audits is used to improve assessment processes, both for the individual assessor and on a program-wide basis. Audits help maintain consumer confidence and high standards for the program.

A Scorecard audit involves a member of the Scorecard Quality Advisory Panel (SQAP) being assigned three random assessments for an assessor. Using the evidence photos provided and any information on the internet (e.g. real estate listings and satellite maps), the auditor checks that the data input into the tool is correct. They present their findings to the panel, and the assessor is informed of the outcome and any remedial work that is required.

Audits results:

- 72 assessments have been audited to date, showing assessments are overall of good quality.
- 7% of the audits indicated that the assessor would benefit from some additional support, which has since been provided in the form of in-person meetings, training or mentoring.
- The most common problems were missing, or poorly tagged, photos and other forms of missing evidence.
- None of the audits required sanctions, such as penalty points or termination of accreditation.

The audits have confirmed that undertaking a robust home energy assessment is a highly skilled activity that requires a surprisingly wide skill set.

How the Scorecard program works

The Scorecard is designed to benefit householders and the community in these ways:

The Scorecard program looked at research and talked to stakeholders and the community to design the program. It is critical that the program delivers high quality assessments that encompass technical robustness, effective training, strong risk management and a range of program information resources.

In this section we outline the key features of the program, how they are working and why they are important.

Households considering renovations now have a way to be sure their renovation improves home comfort and makes the home cheaper to run, including:

- Those selling or renting can simply and clearly advertise higher-performing homes.
- Businesses can show their leadership and good corporate citizenship – builders, developers, financiers, real estate agents.
- Community and public housing can see how their portfolio is performing and improve it.
- Households with particular needs, such as high energy bills, uncomfortable homes, declining access to firewood, or with chronic health conditions, can get robust advice specific to their situation.
- Programs can be delivered knowing that investments are based on best advice on cost effective upgrades. This is important for government support or finance organisations that require a focus on value for money and probity.
- Households in energy hardship can be offered an assessment to help understand and reduce their energy bill.

Learning from the Scorecard Community

The Scorecard program underpins home assessment businesses and provides a service for all householders. It is a community service and it's vital that community input drives its development.

Consultation with the public, industry and assessors has been integral to designing, implementing and evaluating the Scorecard program.

Consultation started in late 2016 and has continued over the past two and a half years. Since the commercial release in April 2018, the Scorecard team has engaged in the following public activities.

We thank everyone involved for contributing to the success of the Scorecard program and its continuous improvement and growth.

Workshops	Public events	Ministerial events	Bulletins	Info sessions	Risk reviews
11	7	2	5	2	4

Advisory groups

In 2019, the Program Advisory Group (PAG) is an important component of the program's governance and was set up to provide diverse opinions on governance systems, future growth, marketing, and risks. The PAG has stakeholder representatives from all relevant sectors to ensure the program:

- considers a range of views in the development and growth of the program
- gains insights into developing the market for Scorecard assessments, identify potential commercialisation opportunities and ensure there are enough assessors to meet demand for assessments;
- reduces unnecessary or ineffective controls, streamlining the program's monitoring and evaluation process; and
- considers additional or increased controls to enhance quality assurance where necessary.

The PAG includes four Scorecard assessors with representatives from: Real Estate Industry Victoria, Building Designers Association of Victoria, Property Council, Melbourne University, Green Building Council of Australia, Australian Sustainable Built Environment Council, Energy Consumers Australia and the Housing Industry Association

The Technical Advisory Group (TAG), also formed in 2019 to focus on the tool development and technical aspects of the Scorecard program, and includes energy efficiency experts, tool developers and experienced assessors.

Quality Focus

The Scorecard program aims to deliver an excellent experience for householders and applies strong support for home assessors. The program incorporates feedback from participants and applies that information to support continuous improvement. It is clear how assessors should behave, and checks ensure assessors meet these standards. This protects households and the reputation of the program.

The Scorecard quality principles provide a clear statement of what the program expects of assessors:

1. **Excellent customer experience:** Assessors must demonstrate strong customer relationship and engagement approach and skills, delivering a positive experience for the consumer.
2. **Robust assessment approach:** Assessors must have a strong ability to identify home energy efficiency features in the field and accurate data entry skills, to ensure assessments accurately reflect home performance.
3. **Consumer-focused energy efficiency upgrades advice:** Assessors must have the skills to assess and present appropriate upgrades options, considering the needs of the household.
4. **Knowledge of safety and wellbeing:** Assessors must have the skills to protect themselves and others while working.
5. **Robust administrative process:** Assessors are given Scorecard training and other support services, and must comply with administrative requirements, including audits.
6. **Consultation and continuous improvement:** Assessors are invited to provide feedback to continuously improve the scheme.

Pilot projects carried out during the early phase of the Scorecard program found that only highly skilled assessors could meet these standards. It is critical that any two accredited assessors would give the same house the same rating. To ensure the principles can be delivered, the Scorecard program worked with assessors and experts to develop a process to train, accredit, support and audit assessments and assessors.

The Scorecard program quality focus includes:

- A rigorous accreditation process for assessors, including a quality assurance panel review that ensures only highly experienced and qualified individuals are accredited and only high-quality Scorecard assessments are undertaken.
- Continuous improvements of program procedures based on feedback from stakeholders and industry advancements.
- Auditing - each assessor has regular audits by the Scorecard Quality Advisory Panel.

- Surveys - all customers are invited to complete an online or phone survey after their assessment.
- Transparency – this includes a website that lists all assessors, describes the accreditation process and technical basis of the Scorecard tool, and other key facts.
- A supported technical and customer help line.

The integrity of the Scorecard program is also underpinned by an Assessor Agreement and Code of Conduct

See www.victorianenergysaver.vic.gov.au/save-energy-and-money/get-a-home-energy-assessment/deliver-assessments/assessor-support-materials

For more information, visit the Scorecard website at www.victorianenergysaver.vic.gov.au/Scorecard

Scorecard Quality Advisory Panel

The Scorecard Quality Advisory Panel (SQAP) was set up in November 2016. The members are qualified and experienced Scorecard assessors who perform supervised field examinations for assessor accreditation and audits of Scorecard assessments.

Involving assessors that work in the field has provided high value to the program as they contribute their experiential feedback to the program.

Training and skills development

Why training is needed

There is no clear training or career path for home energy assessors for existing homes. This hampers the development of a professional sector. When the Scorecard program was being designed critical skills and training development were not widely available. The program therefore developed a training strategy to provide the necessary technical, Occupational Health and Safety (OHS) and customer service skills.

Training principles

Potential Scorecard assessors have already gained important assessment skills, either through experience or training, and they must all have relevant and recent OHS training. The Scorecard program provides additional training specific to the program, through a compulsory training day and optional training, such as tutorials and an OHS refresher.

Scorecard training combines face-to-face and online learning. Training is conducted in a classroom, in homes and by webinar. As of July 2019, e-learning modules are under development so applicants can access additional training materials at their convenience and in regional locations.

The training is practical, with a problem-solving approach: participants practice by entering data into the Scorecard tool and practice the Scorecard assessment in a home. They can try out ‘real life’ scenarios, looking at appliances and building features in real homes, explaining the Scorecard star rating and upgrade options to householders. The tutorials are facilitated by experienced assessors who provide feedback throughout the tutorial, share their experiences and solve problems. This training prepares applicants for their practice houses and exam.

Training improvement does not stop after accreditation. The program helps assessors identify professional development areas from assessor pulse check workshops, auditing and quality assurance. Training needs are also shaped by feedback from other stakeholders in the energy efficiency industry and policy. The Scorecard quality principles are used to guide training focus areas.

Training is continually evaluated and revised based on feedback from participants, results obtained in the Scorecard training day test, exams and auditing.

Training events	
Scorecard training days	23
Scorecard training days interstate	1
Scorecard training days regional	1
Scorecard tutorial days	8
Scorecard training intensive week	1
OHS (webinar and classroom)	6

Risk planning

Effective risk management is part of the program design. This is underpinned by a formal risk register that has been developed with stakeholder input. Yearly stakeholder reviews are performed by the Program Advisory Group (PAG).

Spreading the word about the Scorecard

The Scorecard is an Australian-first program released in 2017. As star ratings for homes become known and valued by householders, they will become a standard piece of information about a home.

Innovation

In the early stages of a program, it is important to capture people's interest in something new. Five fun short videos look at reducing your energy bill, improving home comfort, renovating, buying and selling a home.

These videos have proved very popular and can be seen here:
https://www.youtube.com/playlist?list=PLI25liwKHjvW-mRdWkXqZjys49VbFkrKU

Recognising the popularity of these videos, a further five were produced for builders, architects and real-estate agents, showing Scorecard's applications in each of these sectors. These are also available on the Scorecard website.

Outreach

Some 260 different organisations, businesses, media outlets, councils and government departments were contacted to explain the Scorecard and to pass on information to members and stakeholders.

Many organisations have featured Scorecard's informative videos in their social media campaigns and on their websites.

An effective event for Scorecard is the Sustainable House Day, run annually by Renew. In 2018, 226 homes were open across the country and visited by 33,000 people. Scorecard was featured in 30 homes, generating much interest. Scorecard also featured in Renew's social media campaign for Sustainable House Day, reaching more than 360,000 people. Geelong Sustainable House Day similarly featured the Scorecard, getting around 20 enquiries as a result.

The Scorecard program is supported by a comprehensive website to support assessors and the community. This is where the community can find out about the program, watch the videos, read the case studies and find an assessor. Once assessors are accredited, they can list the services they provide (such as offering upgrades or working on renovations with a builder) on the website.

See www.victorianenergysaver.vic.gov.au/scorecard

Business opportunities and the future

The Scorecard program creates the opportunity to develop new business models offering assessments, upgrades and related services.

An analysis was undertaken by Point Advisory to examine the opportunities for commercial and not-for-profit organisations to develop market offerings which use the Scorecard.

This details the need for the Scorecard, who the customers are, the delivery models, the options for market support, governance and longer-term strategies for expansion.

The report can be found here:

https://www.energy.vic.gov.au/__data/assets/pdf_file/0016/251080/DELWP_Scorecard-Commercialisation_Background-Paper.PDF

delwp.vic.gov.au